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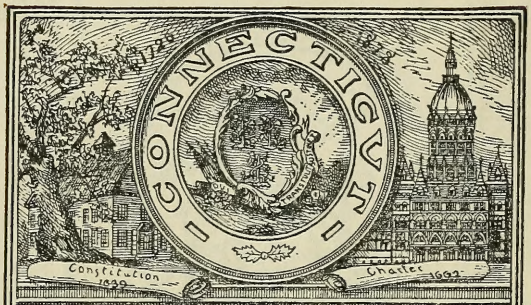

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State of Connecticut Health Bulletin

"For a Clean State and a Healthy People"

Vol. 41 January, 1927 No. 1

This Issue Contains

Cross Connections in Connecticut

Statement of the Facts and Opinions on Cancer Control

Populations, State, Counties, Towns, as of July 1, 1927

An Alcove in the Mental Hygiene Library

News Notes From the Field

Summary of Laboratory Activities for December, 1926

Births, Deaths, Marriages for November, 1926

Incidence of Preventable Diseases for December, 1926

Health Service in the Field

STANLEY H. OSBORN, M. D., C. P. H., Commissioner

ISSUED BY
State Department of Health
HARTFORD

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CONNECTICUT
HEALTH BULLETIN

Vol. 41 January, 1927 No. 1

Issued Monthly by the
STATE DEPARTMENT OF HEALTH

CROSS CONNECTIONS IN CONNECTICUT

By Warren J. Scott, S. B.

The question of cross connections between potable water supplies and impure supplies is one that has been causing increasing concern to health authorities and waterworks men. The principal reason is the mounting number of deaths and cases of sickness from cross connections. The Committee of Cross Connections of the Conference of State Sanitary Engineers compiled a list of epidemics of typhoid or other waterborne diseases, attributed to cross connections. Many figures were unavailable but those obtained showed a total of 123 deaths, 1,664 cases of typhoid fever and 3,155 cases of other intestinal disorders, brought about by cross connections. These cross connections were piped connections between polluted and potable supplies, separated by gate valves, check valves or other means. Gate valves may leak or may be opened inadvertently. Check valves are mechanical devices for allowing the flow of water in only one direction. Many of them have been found to leak very badly, in some cases with the clapper suspended so as not to function at all. Differences in pressure have been depended upon to serve the same purpose as check valves but breaks in mains or other happenings with resultant drop in pressure on the high pressure side have been productive of disaster.

Arrangements whereby polluted water was pumped into public supply mains by auxiliary intakes or by-passes used at times of shortage or other emergency, account for a total of 103 deaths, 5,088 cases of typhoid fever and about 8,000 cases of other intestinal disorders, according to figures that are available. Many figures in addition are missing.

Another fact which has been borne home to waterworks officials is the tendency of the courts in recent damage suits to place increasing responsibility upon the waterworks owners to eliminate dangerous cross connections.

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In general, the kinds of cross connections which exist come under five different classifications: (a) fire service (b) industrial use (c) boiler feed (d) pump priming (e) auxiliary drinking water. One reason for cross connections is to have two supplies available, as on a fire service line, so that in case of the failure of the public supply or a fire pump drawing possibly from a polluted source, the other source would be ready for use. Another reason might be to save the expense of city water where large volumes of water are needed for industrial purposes, and it is desired to have city water available for emergency. Where water is used for cooling purposes, the city supply from a surface source may be at too high a temperature in the summer, necessitating the use of water from a private well. These two supplies are , therefore, piped together at the cooling plant. Many persons have a private well or spring which they pipe to the house and prefer to use for drinking purposes instead of the city supply. They wish, however, to have the city water ready for use if needed, so that both the city supply and the private supply are piped together in the cellar of the house. Such private supplies must be inspected and analyzed before the interconnection can be approved.

New Regulations

In consideration of the danger to the health of Connecticut's citizens, the Public Health Council of the State Department of Health has adopted cross connection regulations as a part of the Sanitary Code of the state. Before the passage of these regulations, two public hearings were held at which waterworks officials, manufacturers and insurance interests were invited to appear and present their views. These hearings resulted in a frank exchange of views and were of immense value. The manufacturers and insurance interests established their desire to cooperate in removing a health menace. Connecticut is a manufacturing state with many leading industrial centers. The problem was a real one and Connecticut's manufacturers should be strongly commended for the manner in which they have put their shoulders to the wheel.

The regulations as adopted provide that after December 31, 1926, no cross connections shall exist between potable and non-potable water supplies, except that installations protected by double check valves of approved type, with adequate facilities for testing, which were in existence on December 31st, may be temporarily permitted with the approval of the State Department of Health. The latter provision was

inserted because it was felt that double check valves of the latest improved type should be given a fair try-out. The length of the extension of time granted will depend on the investigations which the department is now making as to the efficiency of the newest types of check valves.

Double Check Valves Under Surveillance

The Connecticut State Department of Health has not recommended double check valve installations. It has strongly recommended absolute separation of auxiliary supplies. In some cases, manufacturers have advised us that either because they felt the newest check valves would be satisfactory or for financial reasons, they would temporarily depend on double check valves of approved type. They have been told that the check valves may be ordered out at any time if pending investigations prove their inefficiency. For temporary use, the Department has approved the special Factory Mutual check valves and the new Rice valve. The latter is an all bronze valve designed with ample clearance and a round rubber facing which is supposed to produce a hair-line contact between the facing and the seat, so as to close over small particles of grit. Temporary permits have been issued to the owners of double check valve installations, copies of the permits being sent to the water officials in charge. All installations must be provided with water-tight pits, self-indicating gate valves, drip cocks and gages for testing. They will be inspected periodically by the State Department of Health and waterworks officials, for it is well known that whatever measure of success is obtained with double check valves depends largely on inspection and maintenance.

The Work of Elimination

A great majority of cross connections have been eliminated. Hartford and Stamford had already effected complete separation by their own efforts. The results in such cities as New Britain with no cross connections left, Bristol with all eliminated but one double check valve installation, and New Haven with only two, point to the excellent progress made in but a few months of earnest work. Some cities still have a considerable number of double check valves, either in existence previous to the passage of the regulations or since installed, but even here we have a markedly less hazard than with the old neglected connections.

In many cases, separate piping has been provided for polluted water; others have installed tanks filled with city water; city water to large tanks supplied by two sources has been made to discharge above water level; priming connections

have been replaced by small tanks filled from above with city water; for boiler feed or other industrial use, swing joints with an elbow and unions have been used in the case of small diameter piping whereby either of two supplies can be used but both can not be used at once. These represent some of the methods used to bring about complete separation. In many plants, it has been surprisingly easy. Others have been more complicated. As one waterworks official has expressed it, some piping systems have been found to be literally "sewed together" and much time and effort has been needed to separate them.

The regulations provide against interconnection with the public supply unless the auxiliary supply is approved by the State Department of Health. The inspection and analysis of many private supplies has been carried out as a result of requests for approval. Some supplies have been approved, others have been improved and later approved, and still others have been condemned. In this connection, many water supplies of doubtful quality have been brought to light and condemned for drinking purposes.

Results So Far Accomplished

It is felt that the method of procedure carried out in Connecticut has been very satisfactory. It has produced splendid results and has met with excellent cooperation.

Certainly with the precautions which are being taken to protect our watersheds and treat our supplies and with the existing safeguards which nature has provided by storage and dilution, there is no direct menace comparable to pumping a "slug" of polluted water into the mains which supply people for drinking. It is unquestionably a very real and not a fancied danger and has probably caused many isolated cases of sickness or death in our own state, even though not recognized as the factor.

STATEMENT OF THE FACTS AND OPINIONS AGREED TO BY THE INTERNATIONAL MEETING ON CANCER CONTROL HELD AT LAKE MOHONK, N. Y., U. S. A., SEPTEMBER 20-24, 1926.

Although the present state of knowledge of cancer is not sufficient to permit of the formulation of such procedures for the suppression of this malady as have been successfully employed for the control of infectious diseases, there is enough well-established fact and sound working opinion concerning the prevention, diagnosis and treatment of cancer to save many lives, if this information is carried properly into effect.

1. The causation of cancer is not completely understood, but it may be accepted that for all practical purposes cancer is not to be looked upon as contagious or infectious.

2. Cancer itself is not hereditary, although a certain predisposition or susceptibility to cancer is apparently transmissible through inheritance. This does not signify that, because one's parent or parents or other members of the family have suffered from cancer, cancer will necessarily appear in other persons of the same or succeeding generation.

3. The control of cancer, so far as this subject can be understood at the present time, depends upon the employment of measures of personal hygiene and certain preventive and curative measures, the success of which depends upon the intelligent cooperation of the patient and physician.

4. Persons who have cancer must apply to competent physicians at a sufficiently early stage in the disease, in order to have a fair chance of cure. This applies to all forms of cancer. In some forms early treatment affords the only possibility of cure.

5. Cancer in some parts of the body can be discovered in a very early stage, and if these cases are treated properly the prospect for a permanent cure is good.

6. The cure of cancer depends upon discovering the growth before it has done irreparable injury to a vital part of the body and before it has spread to other parts. Therefore, efforts should be made to improve the methods of diagnosis in these various locations and the treatment of the cancers so discovered.

7. The public must be taught the earliest danger signals of cancer which can be recognized by persons without a special knowledge of the subject, and induced to seek competent medical attention when any of these indications are believed to be present.

8. Practitioners of medicine must keep abreast of the latest advances in the knowledge of cancer in order to diagnose as many as possible of the cases of cancer which come to them.

9. Surgeons and radiologists must make constant progress in the refined methods of technic which are necessary for the diagnosis and proper treatment not only of ordinary cases but of the more obscure and difficult ones.

10. There is much that medical men can do in the prevention of cancer, in the detection of early cases, in the referring of patients to institutions and physicians who can make the proper diagnosis and apply proper treatment, when the physicians themselves are unable to accomplish these results. The more efficient the family doctor is, the more ready he is to share responsibility with a specialist.

11. Dentists can help in the control of cancer by informing themselves about the advances in the knowledge of the causes of cancer, especially with relation to the irritations produced by imperfect teeth and improperly fitting dental plates. They can also help by referring cases of cancer which they discover to physicians skilled in the treatment of cancer in this location. It may be doubted whether all dentists fully realize the help which can be obtained from x-ray photographs in revealing not only the state of the teeth but the condition of the bone surrounding them.

12. Medical students should be instructed in cancer by the aid of actual demonstrations of cancer patients, and this to a sufficient extent to give them a good working knowledge of the subject.

13. The most reliable forms of treatment, and, in fact, the only ones thus far justified by experience and observation, depend upon surgery, radium and x-rays.

14. Emphasis should be placed upon the value of the dissemination of the definite, useful and practical knowledge about cancer, and this knowledge should not be confused nor hidden by what is merely theoretical and experimental.

15. Efforts toward the control of cancer should be made in two principal directions: (1) the promotion of research in order to increase the existing knowledge of the subject, and (2) the practical employment of the information which is at hand. Even with our present knowledge many lives could be saved which are sacrificed by unnecessary delay.

POPULATIONS AS OF JULY 1, 1927
STATE, COUNTIES AND TOWNS

The population of the state, estimated as of July 1, 1927, is 1,586,435. The date of July 1 is selected for the reason that it is the mid-year population and is a fairer population to use than a population estimated at any other date.

All death, marriage and birth rates will be calculated, using the populations as contained on these sheets, not only for publication throughout the ensuing year but also in the Registration Report for 1927 when it will appear.

The method of calculation is quite simple. The net change between the census of 1920 and 1910 is found. This may be an increase or a decrease. As the interval between censuses was, roughly, 10 years, the annual change is found by dividing the actual or total difference between censuses by 10. Strictly speaking, the difference is divided by 233/24 years. Having now found the annual change, it is a simple matter to add this amount from year to year, thus continuing the population estimate beyond 1920 by a process called extrapolation.

As of July 1, 1927

State Population 1,586,435

Counties

Fairfield	379,505	New London	114,930
New Haven	475,419	Windham	56,258
Hartford	402,344	Middlesex	49,279
Litchfield	80,900	Tolland	27,800

Towns Over 5,000

Ansonia	19,548	Plainfield	8,818
Branford	7,073	Plainville	5,064
Bridgeport	174,890	Plymouth	6,459
Bristol	26,087	Putnam	9,220
Danbury	21,931	Seymour	8,321
Derby	12,963	Shelton	11,699
East Hartford	14,311	Southington	9,925
Enfield	13,241	Stafford	5,472
Fairfield	15,541	Stamford	48,515
Glastonbury	6,206	Stonington	11,041
Greenwich	26,373	Stratford	17,451
Groton	11,326	Thompson	5,226
Hamden	10,718	Torrington	25,316
Hartford	168,258	Vernon	8,751
Killingly	9,384	Wallingford	12,659
Manchester	21,992	Waterbury	105,960
Meriden	36,807	Watertown	7,506
Middletown	22,932	West Hartford	11,908
Milford	14,673	West Haven	18,834
Naugatuck	16,829	Westport	5,772
New Britain	71,068	Wethersfield	5,264
New Haven	184,727	Winchester	9,109
New London	30,149	Windham	14,418
Norwalk	30,173	Windsor	6,732
Norwich	30,689		

Total, Towns Over 5,000 1,377,329

Towns Under 5,000

Andover	402	Mansfield	3,034
Ashford	677	Marlborough	303
Avon	1,685	Middlebury	1,221
Barkhamsted	689	Middlefield	1,054
Beacon Falls	1,926	Monroe	1,283
Berlin	4,737	Montville	3,878
Bethany	395	Morris	463
Bethel	3,021	New Canaan	4,069
Bethlehem	534	New Fairfield	451
Bloomfield	2,835	New Hartford	1,635
Bolton	459	Newington	2,913
Bozrah	858	New Milford	4,643
Bridgewater	457	Newtown	2,647
Brookfield	856	Norfolk	1,105
Brooklyn	1,575	North Branford	1,322
Burlington	1,037	North Canaan	1,885
Canaan	533	North Haven	1,860
Canterbury	918	North Stonington	1,176
Canton	2,483	Old Lyme	879
Chaplin	375	Old Saybrook	1,453
Cheshire	3,524	Orange	1,885
Chester	1,871	Oxford	994
Clinton	1,225	Pomfret	1,324
Colchester	2,032	Portland	3,801
Colebrook	478	Preston	3,380
Columbia	751	Prospect	212
Cornwall	798	Redding	1,195
Coventry	1,576	Ridgefield	2,543
Cromwell	2,732	Rocky Hill	1,976
Darien	4,367	Roxbury	609
Durham	951	Salem	420
Eastford	492	Salisbury	2,052
East Granby	1,256	Saybrook	2,648
East Haddam	2,310	Scotland	373
East Hampton	2,416	Sharon	1,465
East Haven	4,852	Sherman	526
East Lyme	2,579	Simsbury	3,291
Easton	1,010	Somers	1,687
East Windsor	4,033	Southbury	1,055
Ellington	2,224	South Windsor	2,112
Essex	2,883	Sprague	2,488
Farmington	4,127	Sterling	1,262
Franklin	570	Suffield	4,246
Goshen	675	Thomaston	4,237
Granby	1,334	Tolland	1,004
Griswold	4,218	Trumbull	3,333
Guilford	2,723	Union	243
Haddam	1,669	Voluntown	612
Hampton	453	Warren	349
Hartland	428	Washington	1,553
Harwinton	2,377	Waterford	4,566
Hebron	931	Westbrook	829
Kent	1,078	Weston	677
Killingworth	505	Willington	1,266
Lebanon	1,286	Wilton	1,182
Ledyard	1,223	Windsor Locks	3,492
Lisbon	900	Wolcott	838
Litchfield	3,247	Woodbridge	1,395
Lyme	660	Woodbury	1,648
Madison	2,105	Woodstock	1,743

Total, Towns Under 5,000 209,106

AN ALCOVE IN THE MENTAL HYGIENE LIBRARY

Repeated inquiries from various sources indicate that the public is interested in studying the subject of mental hygiene. The following partial list, of books only, is selected from a bibliography prepared by the National Committee for Mental Hygiene, 370 Seventh Ave., New York City. There is an exhaustive pamphlet collection also, an index to which will be supplied to anyone upon application to the Division of Mental Hygiene of the Connecticut State Department of Health. Books starred are prepared in simpler and more popular form.

GENERAL

An Introduction to the Study of the Mind. William A. White.
The Direction of Human Evolution. Edwin G. Conklin.
Leaves from the Golden Bough. Culled by Lady Frazer.
Influencing Human Behavior. Henry A. Overstreet.
Mental Adjustments. Frederick Lyman Wells.
Mind and Medicine. Thomas W. Salmon.
*A Mind that Found Itself; an Autobiography (Including an account of) the mental-hygiene movement). Clifford W. Beers.
The Normal Mind; an Introduction to Mental Hygiene and the Hygiene of School Instruction. William H. Burnham.
Personality and Social Adjustments. Ernest R. Groves.
*Psychology of Insanity. Bernard Hart.
Psychology of Special Abilities and Disabilities. Augusta Bronner.
Psychology. What it has to teach you. Everett Dean Martin.
*Social Aspects of Mental Hygiene. Frankwood E. Williams.
*Your Mind and You: Mental Health. George K. Pratt.

MENTAL HYGIENE OF CHILDHOOD

*The Challenge of Childhood: Studies in Personality and Behavior. Ira S. Wile.
Character Training in Childhood. Mary S. Haviland.
The Child: His Nature and His Needs. (The Children's Foundation, Valparaiso, Indiana).
*Concerning Parents: A Symposium on Present Day Parenthood. Papers presented before a conference under the auspices of the Child Study Association.
Fitting the School to the Child: An Experiment in Public Education. Elizabeth A. Irwin and Louis A. Marks.
The Mental Hygiene of Childhood. William A. White.
The Nervous Child. Hector C. Cameron.
*The Problem Child in School. Mary B. Sayles. (Joint Committee on Methods of Preventing Delinquency).
The Psychology of the Unadjusted School Child. John J. B. Morgan.
*School and Home. Angelo Patri.
Speech Training for Children. Margaret Gray Blanton and Smiley Blanton.
*Three Problem Children. Narratives from the case records of a child guidance clinic. Mary B. Sayles. (Joint Committee on Methods of Preventing Delinquency, New York).
*Wholesome Childhood. Ernest R. Groves and Gladys H. Groves.

ADOLESCENCE

*The Adolescent Girl: A study from the Psychoanalytic viewpoint. Phylis Blanchard.
*The Adolescent Girl: A book for parents and teachers. Winifred Richmond.
Psychology of Adolescence. Frederick Tracy.

PSYCHOANALYSIS

The Development of Psychoanalysis. S. Ferenczi and Otto Rank.
*The Freudian Wish and its Place in Ethics. Edwin B. Holt.
Introductory Lectures on Psychoanalysis. Sigmund Freud. (Only the British edition edited by Ernest Jones is recommended).
*The New Psychology and the Teacher. H. Crichton Miller.
Psychoanalysis and Its Place in Life. M. K. Bradby.
Psychoanalysis: A brief account of the Freudian theory. Barbara Low.
A Psychoanalytic Study of the Family. J. C. Flugel.
Psychopathology of Everyday Life. Sigmund Freud; translated by A. A. Brill.

MENTAL DISEASE

The Inheritance of Mental Disease. Abraham Myerson.
Insanity and the Criminal Law. William A. White.
The Kingdom of Evils; psychiatric social work presented in one hundred case histories together with a classification of social division of evil. Elmer E. Southard and Mary C. Jarrett.
Mental Diseases; A Public Health Problem. James V. May.
Outlines of Psychiatry. William A. White.
Practical Clinical Psychiatry for Students and Practitioners. Edward A. Strecker and Franklin G. Ebaugh.
*A Present-Day Conception of Mental Disorders. C. Macfie Campbell.
Syphilis of the Innocent. Harry C. Solomon and Maida H. Solomon.

FEEBLEMINDEDNESS

Brightness and Dullness in Children. Herbert H. Woodrow.
Feeblemindedness in Children of School Age. C. Paget Lapage.
Intelligence of School Children; How Children Differ in Ability, the Use of Mental Tests in School Grading, and the Proper Education of Exceptional Children. Lewis M. Terman.
*The Psychology of Subnormal Children. Leta S. Hollingworth.
Social Control of the Feebleminded: A study of social programs and attitudes in relation to the problems of mental deficiency. Stanley P. Davies.
*Special Talents and Defects. Leta S. Hollingworth.
*The Retarded Child, How to Help Him. A handbook for teachers describing the individual program method of training the deficient child in rural and graded schools. Arnold Gesell.

DELINQUENCY

*Abnormal Behavior; Pitfalls of Our Mind; and introduction to the Study of abnormal and antisocial behavior. Irving J. Sands and Phyllis Blanchard.
The Child, the Clinic and the Court.
The Delinquent Girl, a Study of the Girl on Parole in Massachusetts. Edith N. Burleigh and Francis R. Harris.
Determinants of Sex Delinquency in Adolescent Girls; Based on Intensive Studies of 500 Cases. Anne T. Bingham.
The Individual Delinquent; a textbook of diagnosis and prognosis for all concerned in understanding offenders. William Healy.
*Mental Conflicts and Misconduct. William Healy.
*The Young Delinquent. Cyril Burt (University of London Press).
*Youth in Conflict. Miriam Van Waters.

NEWS NOTES FROM THE FIELD

Physicians Licensed During December, 1926.

Bridgeport, Conn., Nelson, Walter N., Bridgeport Hospital.
Hamden, Conn., Vogel, Harold T., 110 Wakefield Street.
Hartford, Conn., Radom, Myron M., 336 Windsor Avenue.
Meriden, Conn., Starr, Richard M., Meriden Hospital.
Milford, Conn., Kellner, Frank E., 52 Broad Street.
New Britain, Conn., Garcin, Cecil R., New Britain General Hospital.
New Haven, Conn., Blum, Max, 39 Frank Street.
New Haven, Conn., Dorgan, Bernard F., 1436 Boulevard.
New Haven, Conn., Hippolitus, Jean D., 694 Howard Avenue.
New Haven, Conn., Jenkins, Ralph H., 1447 Chapel Street.
New Haven, Conn., Klebanoff, Harry E., New Haven Hospital.
New Haven, Conn., Norton, Richard C., New Haven Hospital.
New Haven, Conn., Wakeman, Alfred M., New Haven Hospital.
Niantic, Jameson, Rose Howe, Connecticut State Farm for Women.
Norwich, Conn., Suplicki, John W., 167 Cliff Street.
Sandy Hook, Conn., Desmond, Waldo F.
Shelton, Conn., Burns, George D., 45 Congress Avenue.
Stamford, Conn., Fisher, Frank L., Stamford Hospital.
Waterbury, Conn., Brown, Abe S., 122 Cooke Street.
Waterbury, Conn., Elliot, Kirkor G., Saint Mary's Hospital.
Waterbury, Conn., Marshak, Irving J., Saint Mary's Hospital.
Anton, Joseph I., Brooklyn Hebrew Maternity Hospital, 1395 Eastern Parkway, Brooklyn, New York.
McPartland, Charles E., Massachusetts General Hospital, Boston, Mass.

Health Officers Appointed. The Hartford County Health Officer, Daniel Markham, has announced the following appointments:

James A. Davis, M. D., health officer of West Hartford, replacing Dr. R. W. E. Alcott.

Mr. Allen A. Hall, health officer of Marlborough, replacing Mr. William W. Bolles.

Harvey B. Goddard, M. D., as temporary health officer of East Hartford and South Windsor, replacing Dr. W. D. Scudder.

Connecticut Waterworks Men Meet. On December 14th, about fifty Connecticut water officials attended a conference called by the State Department of Health in Hartford. The principal topic of discussion was the carrying out of the cross connection regulations recently adopted by the department. These regulations prohibit all cross connections after December 31, 1926, except that temporary extension of time is granted where double check valve installations of approved type are installed. Connecticut is a state with many industrial centers and the number of connections with auxiliary supplies has been large.

The experiences of the department with elimination of cross connections were described by Warren J. Scott, Director of the Bureau of Sanitary Engineering, and a number of water superintendents discussed the situations in their respective cities and towns. A series of round table discussions on various phases of the work was participated in. John S. Caldwell, Assistant Secretary of the New England Insurance Exchange, talked on "Rating of Public Water Supplies for Fire Protection". A paper on the new Wallingford filter plant was read by William E. MacKenzie, Superintendent of the Wallingford Water Department, and Edward E. Minor, General Manager of the New Haven Water Company, opened a discussion on watershed policies.

Public Health Nursing. Berlin is the latest town in the state to secure a public health nursing service.

At the town meeting in October, provision was made for an advisory committee to take charge of the service, and funds were voted for maintaining the work.

Berlin is the second town in the state in which public health nursing work has been inaugurated as an official town service.

Berlin's first nurse reported for duty January first.

Public Health Course for Hospitals. The public health course of fourteen lectures which has been given previous years wholly, or in part, at nine hospitals, is to be given in 1927 at St. Francis' Hospital, Hartford; St. Mary's Hospital, Waterbury; and a selected number of lectures at Griffin Hospital, Derby.

Children Immunized

by

Toxin-Antitoxin

DO NOT HAVE DIPHTHERIA

Laboratories

SUMMARY OF BUREAU ACTIVITIES FOR DECEMBER, 1926

DIAGNOSTIC

	+	—	?	Unclassified	Total	
Typhoid	3	79	1	.....	83	
Paratyphoid A	.....	83	.....	.....	83	
Paratyphoid B	.....	83	.....	.....	83	
Diphtheria	193	1,914	1	.....	2,108	
Diphtheria Virulence	19	16	.....	.....	35	
Vincent's Angina	6	729	.....	.....	735	
Haemolytic Streptococci	26	709	.....	.....	735	
Tuberculosis	23	96	.....	.....	119	
Syphilis	255	1,670	175	.....	2,100	
Gonorrhoea	27	108	.....	.....	135	
Pneumonia	2	1	.....	.....	3	
Malaria	.....	3	.....	.....	3	
Rabies	7	2	.....	.....	9	
Glanders	.....	1	.....	.....	1	
Feces Examinations	.....	1	.....	.....	1	
Special Specimens	1	8	.....	28	37	6,270

CHEMICAL AND BACTERIOLOGICAL

Milk samples	313	
Water samples	246	
Sea food samples	8	
Clinical thermometers	82	649
Total examinations made		6,919

1926 a Banner Year

During 1926 a total of 25,114 laboratory examinations was made. This is an increase of over 5,000 examinations over the 19,976 made during 1925. Examinations of diphtheria cultures were 5,426 less than for last year and diagnostic examinations for diseases other than diphtheria decreased from 9,306 in 1925 to 7,343 in 1926. A marked increase is evident, however, in all other lines of the laboratory work, as is shown by the following table:

Year	Serology	Milk	Water	Sewage	Sea food	Clinical Thermometers
1925	19,976	2,707	2,978	82	407	1,473
1926	25,114	5,365	4,788	167	521	2,291
Increase	5,138	2,658	1,810	85	114	818
Percentage Increase	25.1	98.1	60.8	103.6	28.0	55.5

Vital Statistics

MONTH OF NOVEMBER

TOTALS TO DATE, FIRST ELEVEN MONTHS, 1926, 1925, 1924

	Births	Birth Rate*	Marriages	Mar. Rate*	Deaths	Death Rate*
1926	25,916	18.1±.1	11,291	8.0±.08	16,480	11.5±.1
1925	27,439	19.5±.1	11,685	8.3±.08	16,127	11.5±.1
1924	29,275	19.9±.1	12,186	8.8±.08	16,528	11.3±.1

*Rate on annual basis per 1,000 population

Only one month more remains to be tabulated of 1926. With a ballot of eleven months behind us speculation may be indulged in with fair certainty. So, while 1926 did not get away to the most favorable of starts, the final months have given such low mortality that the year so far is on even terms with 1925 and within hailing distance of 1924, which was the most favorable ever to be recorded in Connecticut.

These statements are made with respect to the deaths. With regard to the births, as the modern and expressive saying goes, "not so good". In fact, the birth rate is so low as to be almost doubted. In fact, if the rates were the result of some laboratory experiment, the suspicion would be strong that there had been some doctoring.

At any rate it is certain that the decrease in births is far more than to be accounted for as random sampling or random fluctuation. No doubt some of this is accounted for by the fact that the marriages are decreasing in excess of the chance variation. It is possible that the immigration laws are keeping out the foreigners who multiply faster than the American. The final tabulation will show this, figures which will not be available for some time to come. However, it is certain that in the past the foreign mothers had more children, after the first was born, than the American mothers. If these foreign mothers are being excluded, then it is but natural to expect a decrease in the birth rates.

Births

The births number only 2,068 for the month, a decrease of 264 below the 2,332 reported in 1925. The birth rate for the month, referred to on an annual basis per 1,000 population reaches the astonishingly low value of 15.9.

There are 48 towns in the state having a population of 5,000 or over. Of these towns 17 reported more births in 1926 for November, than in 1925, but of these 17 there were 5 with an increase of only 1 and the following 4 have increases of 10 or more:

Bristol 12±10	Torrington 12±9
Meriden 10±11	Waterbury 10±17

The figures show that none of these increases is significant. While it has been the custom for some time past to tabulate only the towns of increase and to list those with increases of 10 or more, if the decrease in the number of births continues, it may be advisable to publish the towns of decrease.

Stillbirths

Records of 89 stillbirths were received. This is at the rate of 41.2 per 1,000 total births. In 1925 there were 84 stillbirths among a total of 2,416 births, including living and stillbirths. This was at a rate of 34.7 per 1,000 total births. The difference between these rates is 6.5±5.5, showing that there is nothing significant in the increase.

Of the 89 stillbirths, 49 were males and 40 were females, giving a sex ratio of 122 males to 100 females. This is not as high a sex ratio as is occasionally experienced, but it is higher than the sex ratio of the living births. Last month there was a very low sex ratio of stillbirths.

Deaths

The deaths number 1,317 which is a total less by 136 than the 1,453 reported in 1925. This is just what was needed if 1926 is to be a favorable year. The resulting death rate of 10.1 is the lowest in the last 6 years. In general, November is a month in which the winter upward swing of increased mortality has begun. Apparently this year was very favorable. The average death rate over the past 6 years was 10.85 and in the series of rates the scatter about the mean was 0.4. We have thus about the same conditions as held last month and it may be concluded that, despite the rather large departure of 1926 from the mean, still there is firm regularity in the month over the period considered.

Next will be considered a comparison of 1926 with 1925 for certain diseases, showing the increase or decrease.

Cause of Death	1926	1925	Increase	Decrease
Diseases of the Heart	226±15	269±16	....	43±22
Epidemic Encephalitis	1± 1	1± 1	....	....
Pneumonia Undefined	0	0	....	....
Typhoid Fever	2± 1	3± 2	....	1± 2
Measles	0	3± 2	....	3± 2
Scarlet Fever	3± 2	4± 2	....	1± 3
Whooping Cough	2± 1	13± 4	....	11± 4
Diphtheria	5± 2	11± 3	....	6± 4
Influenza	13± 4	28± 5	....	15± 7
Tuberculosis, Pulmonary	77± 9	68± 8	9±12	....
Tuberculosis, Other Forms	9± 3	8± 3	1± 4	....
Cancer	138±12	142±12	....	4±17
Cerebrospinal Meningitis	1± 1	0	1± 1	....
Poliomyelitis	0	0	....	....
Pneumonia, Lobar	57± 7	83± 9	....	26±12
Pneumonia, Broncho	41± 6	90± 9	....	49±11
Diarrhoea and Enteritis Under 2	10± 3	11± 3	....	1± 5
Puerperal Diseases	15± 4	7± 3	8± 5	....
Accident	84± 9	91±10	....	7±13
Suicide	9± 3	14± 4	....	5± 5
Homicide	0	4± 2	....	4± 2
Other Causes	624±25	603±25	21±35	....
Totals	1,317±36	1,453±38	40	176

In the figures above we have a most encouraging column of decreases. The decrease for deaths due to diseases of the heart is significant from a purely mathematical point of view. That is to say, it is a greater decrease than might be expected to arise from pure chance. Similarly the decreases in deaths due to whooping cough and influenza are of great note. This decrease in influenza may mean less of the disease in the coming winter.

Note also the very emphatic decreases in lobar and broncho pneumonia again perhaps indicative of a favorable winter, adding, hastily, weather permitting.

The deaths due to accidental causes decrease somewhat but not by an amount worthy of special note. Of these deaths 36 were due to automobile accidents, as against 38 in 1925. Due to the heavy traffic to and from football games, a traffic furthermore confused by its converging character, it might be expected that deaths due to automobile accidents would increase. But such is apparently not the case—certainly not in the last two years.

Of the increases there is none of moment, though it is unfortunate that an increase should appear for puerperal diseases. It is apparently one of those accidental occurrences which must be expected from time to time.

Marriages

The number of marriages went up a bit over 1925, though the increase was so small as to result in a lower marriage rate owing to the increase of population being so great as to offset the increase and more, too. In numbers, there were 1,187 marriages in 1926 and 1,178 in 1925, an increase of 9.

FOR SIX YEARS—NOVEMBER, 1926

CONNECTICUT	1921	1922	1923	1924	1925	1926
BIRTHS *Birth Rate*	2675 22.6	2362 19.6	2353 19.1	2495 19.9	2332 18.3	2068 15.9
MARRIAGES *Marriage Rate*	1142 9.6	1311 10.9	1365 11.1	1219 9.7	1178 9.2	1187 9.1
DEATHS *Death Rate*	1292 10.9	1346 11.2	1307 10.6	1368 10.9	1453 11.4	1317 10.1
COMMUNICABLE DIS.* DEATHS *Per Cent to Total Deaths*	118 9.1	154 11.4	166 12.7	117 8.5	131 9.0	103 7.8
DEATHS UNDER 1 YEAR *Rate Per 1,000 Births*	160 56.3	131 50.3	156 61.0	178 67.3	165 66.4	124 51.6

*Includes Typhoid Fever, Measles, Scarlet Fever, Whooping Cough, Diphtheria, Tuberculosis Pulmonary, Cerebrospinal Meningitis, Poliomyelitis, Influenza.

Births, Marriages and Deaths

Statistics November, 1926

State of Connecticut	Population Est. as of July 1, 1926 Based on U. S. Census	TOTALS				DEATH RATES			AGE GROUPS		
		Births	Stillbirths	Marriages	Deaths	All Causes (per 1,000 population)	Tuberculosis (per 1,000 population	Children under 1 year (per 1,000 births	Under 1 year	1 to 5 years	65 years and over
	1,558,996	2068	89	1187	1317	10.1	0.6	51.6	124	29	506
Ansonia	19,291	17	.....	21	11	6.8	0.6	83.3	2	.....	5
Branford	7,014	8	.....	7	6	10.3	1.7	.....	.....	.....	2
Bridgeport	170,717	236	8	123	106	7.5	0.6	27.4	7	2	32
Bristol	25,354	53	2	28	19	8.9	.....	101.0	5	1	3
Danbury	21,931	37	3	21	32	17.0	2.2	68.4	3	.....	15
Derby	12,732	31	4	10	15	14.1	0.9	141.5	5	.....	2
East Hartford	13,950	7	1	11	7	6.0	0.9	81.1	1	.....	3
Enfield	13,039	17	.....	13	14	12.9	.....	127.6	3	1	8
Fairfield	15,041	15	.....	2	9	7.2	0.8	133.3	2	.....	5
Glastonbury	6,124	4	.....	6	5	9.7	.....	.....	.....	.....	4
Greenwich	25,790	47	7	46	22	10.2	.....	78.7	3	.....	8
Groton	11,045	6	.....	4	11	12.0	.....	.....	.....	.....	10
Hamden	10,434	9	1	10	11	12.7	1.2	.....	.....	.....	8
Hartford	164,228	309	11	126	143	10.5	0.4	39.5	13	4	47
Killingly	9,218	10	2	8	14	18.2	.....	76.9	1	1	10
Manchester	21,505	28	2	11	5	2.8	0.6	.....	.....	.....	3
Meriden	36,529	61	.....	32	21	6.9	1.6	47.7	3	.....	7
Middletown	22,891	35	4	23	28	14.7	0.5	41.2	2	.....	10
Milford	14,073	4	1	3	10	8.5	.....	.....	.....	.....	6
Naugatuck	16,589	3	.....	9	1	0.7	.....	.....	.....	.....	.....
New Britain	69,482	121	8	58	39	6.7	.....	43.4	6	2	11
New Haven	181,823	239	8	154	153	10.1	0.5	43.9	14	3	58
New London	29,566	40	2	20	21	8.5	0.8	.....	.....	1	9
Norwalk	29,859	38	3	14	44	17.7	0.8	37.2	2	1	15
Norwich	30,576	52	1	24	44	17.3	1.6	15.6	1	.....	15
Plainfield	8,694	5	.....	5	7	9.7	.....	160.0	2	.....	3
Plymouth	6,364	2	.....	2	5	9.4	.....	151.8	1	.....	3
Putnam	9,105	10	1	16	8	10.5	1.3	60.9	1	1	2
Seymour	8,116	3	.....	3	2	2.9	.....	240.0	2	.....	.....
Shelton	11,398	12	1	4	12	12.6	1.1	.....	.....	.....	4
Southington	9,727	12	.....	5	6	7.4	.....	.....	.....	.....	2
Stafford	5,454	16	.....	3	4	8.8	.....	.....	.....	.....	2
Stamford	47,373	89	5	50	48	12.2	0.3	53.3	5	.....	20
Stonington	10,930	10	.....	8	11	12.1	.....	.....	.....	.....	7
Stratford	16,768	16	.....	5	11	7.2	1.4	114.8	2	.....	4
Thompson	5,203	4	.....	2	3	6.9	2.3	.....	.....	.....	.....
Torrington	24,929	43	2	8	17	8.1	.....	24.5	1	1	4
Vernon	8,787	13	.....	10	13	17.7	.....	85.1	1	.....	4
Wallingford	12,571	8	1	9	7	6.7	1.0	.....	.....	.....	5
Waterbury	104,047	161	7	82	86	9.9	1.1	75.9	14	4	17
Watertown	7,359	5	.....	6	4	6.5	1.6	137.9	1	1	1
West Hartford	11,562	17	.....	5	12	12.4	.....	135.5	2	.....	5
West Haven	18,334	21	.....	11	25	16.4	0.7	.....	.....	.....	8
Westport	5,685	4	.....	3	4	8.4	2.1	.....	.....	.....	3
Wethersfield	5,141	2	.....	2	6	14.0	.....	.....	.....	.....	3
Winchester	9,074	14	.....	5	14	18.5	1.3	.....	.....	.....	8
Windham	14,391	28	.....	12	27	22.5	0.8	223.6	6	2	8
Windsor	6,584	2	.....	6	8	14.6	.....	137.9	1	.....	3
Towns under 5,000	212,599	144	4	141	186	10.5	0.7	47.2	12	4	94

DEATHS FROM IMPORTANT CAUSES

Diseases of the Heart	Encephalitis Epidemic	Pneumonia Undefined	Typhoid Fever	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Influenza	Tuberculosis-Pulmonary	Tuberculosis Other forms	Cancer	Meningitis-Cerebrospinal	Poliomyelitis	Pneumonia—Lobar	Pneumonia—Broncho	Diarrhoea-Enteritis Under 2	Puerperal Diseases	Accident	Suicide	Homicide	Institutional Deaths	Non-resident Deaths
226	1		2		3	2	5	13	77	9	138	1		57	41	10	15	84	9		447	210
4							1									1						
1									1													
17							1		5		15			8		1	2	11			57	18
1								1						4	2			1	1		8	1
4									4		4						1	1			11	4
									1		2					1		1			8	5
2									1		1				1							
5															2		1				1	1
4									1													1
2																						
4									1					2	1			3			6	3
4											3										1	
3									1		1			1	1							2
25	1				1		1	1	3	1	16	1		6	10		2	13			72	25
3																					1	
											5										1	1
4								1	1		1			1	1						9	3
6									2					2	3			1			22	17
2														1	1				1		3	
1																						
5										1	3			3	1	1		4			14	2
19								2	3	2	13			7	8		1	8	2		67	22
5							1				1						1	3	1		9	5
11					1				2		4			6		1	1	7			14	3
5								1	15		7			1							22	14
1											1				1							
1											1											
2							1				1										4	3
									9												8	8
2											1			1								
											1										1	
5								2			8			1		2	2	5	1		19	8
4											1							1				2
3									1						1		1					2
									1		2											1
			1								1				2			3			5	1
4																					1	
1											1			2							1	
8									1	4	9			2			2	6			32	10
									1						1							
											4					1		1			3	2
4									7		2			4	1			1			8	8
							1														1	
1											1			2							1	
1									1		2			1				2			4	2
5					1				1	1	1				1	1		1			9	2
2							1				1											
45			1					5	14		24			2	3	1	1	11	3		24	34

Preventable Diseases

INCIDENCE OF DISEASE FOR MONTH OF DECEMBER, 1926

(As compared with previous years)

A comparison of the daily morbidity reports received during the month of December, 1926, with the corresponding month for the years 1921, 1922, 1923, 1924 and 1925.

DISEASE	Average 1921-1925 for December	Mean 1921-1925 for December	1921	1922	1923	1924	1925	1926
Cerebrospinal Meningitis	3	4	1	4	4	1	4	2
Diphtheria	306	305	375	370	305	293	185	122
Encephalitis Epidemic	3	5	2	2	.....	7	5	4
Measles	704	542	542	1,234	886	71	787	225
Poliomyelitis	3	2	3	2	7	2	2	2
Scarlet Fever	484	436	411	436	474	824	276	288
Smallpox	1	3	3	2	1	.....	.....	.....
Typhoid Fever	24	27	17	14	27	33	30	8
Tuberculosis Pulmonary	102	105	92	116	114	105	85	89
Whooping Cough	200	222	155	280	116	222	224	163

A comparison of the morbidity on these diseases for the two preceding months, October and November with the December record is as follows:

	October	November	December
Cerebrospinal Meningitis	3	2	2
Diphtheria	108	111	122
Encephalitis Epidemic	2	3	4
Measles	62	58	225
Poliomyelitis	9	1	2
Scarlet Fever	139	229	288
Smallpox	.....	.....	.....
Typhoid Fever	17	10	8
Tuberculosis Pulmonary	112	105	89
Whooping Cough	134	175	163

Cases of Other Reportable Diseases

Chickenpox	566	Trachoma	1
Conjunctivitis Infectious	3	Trichinosis	1
Encephalitis Epidemic	4	Gonorrhoea	93
German Measles	10	Syphilis	70
Influenza	47		
Mumps	61	Total	866
Septic Sore Throat	10		

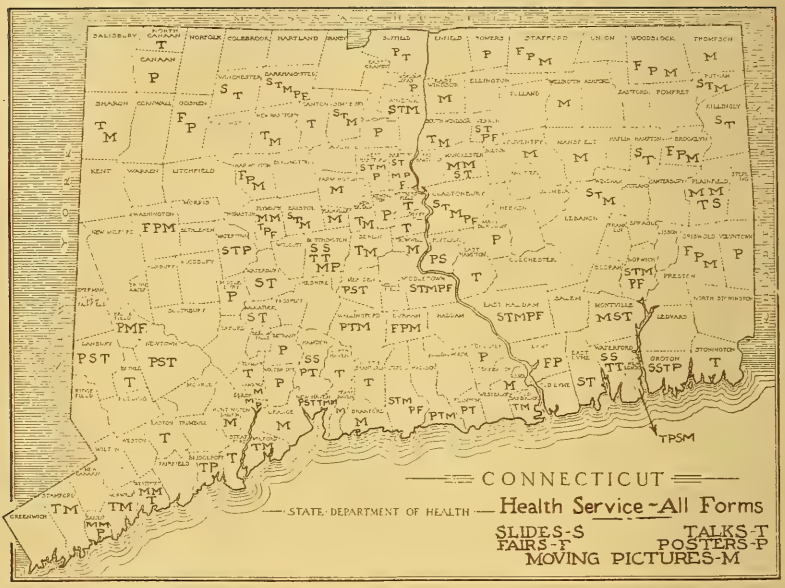
Cases of Occupational Diseases

Acute toxic eczema from fulminate of Mercury	4	Eczema from China Wood Oil	1
Benzol Poisoning	1	Ulcerations	1
Carbon Monoxide poisoning	1		
Dermatitis	2	Total	10

Cases of Certain Reportable Diseases

December, 1926

	Population Est. as of July 1, 1926	Typhoid Fever	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Meningitis Cerebrospinal	Poliomyelitis	Pulmonary Tuberculosis	Other Forms Tuberculosis	Pneumonia Lobar	Broncho-Pneumonia	Other Com. Diseases
State Total	1,558,996	8	225	288	163	122	2	2	89	12	173	122	866
NEW HAVEN CO.	**467,392**	**5**	**5**	**38**	**15**	**32**		**1**	**32**	**4**	**42**	**32**	**386**
New Haven	181,823	3	2	9	1	5			15	1	12	14	154
Waterbury	104,047	1		8	2	4			10		11	7	10
Meriden (city and town)	36,529	1	1	8	11	4			1		8	6	141
Ansonia	19,291				1	12		1					8
Orange (inc. West Haven)	18,334		1			1			5	2	5		9
Naugatuck	16,589			1		3							
Wallingford (town and boro)	12,571			1		1			1				
Milford	14,073			3							1	1	4
Derby	12,732												
Hamden	10,434			5		1				1	1	2	15
Branford (town and boro)	7,014					1							
Seymour	8,116			3									1
Towns under 5,000	25,830		1								4	2	44
FAIRFIELD CO.	**371,561**	**1**	**11**	**152**	**38**	**30**			**14**	**4**	**60**	**30**	**130**
Bridgeport	170,717		5	83	4	19			6	3	31	9	42
Stamford (city and town)	47,373	1	1	20	21				3	1	5	2	25
Norwalk	29,859		1	11	2	1					6	8	3
Danbury (city and town)	21,931			6					1		1		
Greenwich (town and boro)	25,790		1	14	8	2			1		10	10	16
Stratford	16,768			6		4			1		1	1	
Fairfield	15,041			8	3				1		1		26
Shelton	11,398												1
Westport	5,685			1									
Towns under 5,000	26,999		3	3		4			1		5		17
HARTFORD CO.	**393,501**		**7**	**60**	**79**	**29**	**1**		**20**	**4**	**45**	**41**	**237**
Hartford	164,228		3	34	18	9			13	2	24	26	94
New Britain	69,482		1	12	35	2			3	1	3	7	20
Bristol (city and town)	25,354		2	2	11	2			2		5		54
Manchester	21,505			2	4	4			1			1	1
Enfield	13,039					6				1	1	2	1
East Hartford	13,950						1		1		2		2
Southington (town and boro)	9,727			6							2		1
West Hartford	11,562			2	3	1					3	2	20
Windsor	6,584			1	1	1					1		4
Glastonbury	6,124					2							6
Wethersfield	5,141			1							3		
Towns under 5,000	46,805		1		7	2					1	3	34
NEW LONDON CO.	**113,554**		**2**	**9**	**5**	**3**		**1**	**15**		**9**	**2**	**47**
Norwich (city and town)	30,576					1			3		2	2	1
New London	29,566		2	2		2			6		1		8
Stonington (town and boro)	10,930												4
Groton (town and boro)	11,045				5			1			4		22
Towns under 5,000	31,437			7					6		2		12
LITCHFIELD CO.	**80,282**			**4**	**2**	**3**			**2**			**4**	**12**
Torrington (town and boro)	24,929					1							1
Winchester (inc. Winsted	9,074												
Plymouth	6,364								1			2	
Watertown	7,359												
Towns under 5,000	32,556			4	2	2			1			2	11
WINDHAM CO.	**55,799**		**196**	**11**	**16**	**12**	**1**		**2**		**9**	**5**	**8**
Windham (inc. Willimantic)	14,391			6	5				1			2	1
Putnam (city and town)	9,105		12	4	2	10					2	1	
Plainfield	8,694		12								2	1	
Killingly (inc. Danielson)	9,218		144	1	4	2	1				5		5
Thompson	5,203		1										1
Towns under 5,000	9,188		27		5				1			1	1
MIDDLESEX CO.	**49,185**	**1**	**4**	**4**	**3**	**12**			**2**		**6**	**4**	**24**
Middletown (city and town)	22,891			3		11							9
Middletown State Hospital													3
Towns under 5,000	26,294	1	4	1	3	1			2		6	4	12
TOLLAND CO.	**27,722**	**1**		**10**	**5**	**1**			**2**		**2**	**4**	**22**
Vernon (inc. Rockville)	8,787										1	2	1
Stafford (town and boro)	5,454				3							2	
Towns under 5,000	13,481	1		10	2	1			2		1		21



HEALTH SERVICE

USED IN

SPREADING THE KNOWLEDGE OF

DISEASE PREVENTION

AND

HEALTH PROMOTION

Library, Hygienic Laboratory,
25th & E. Sts. N.W.,
Washington, D.C.

State of Connecticut Health Bulletin

"For a Clean State and a Healthy People"

Vol. 41 February, 1927 No. 2

This Issue Contains

Telephone Numbers of State Department of Health

Physicians, Dentists, Public Health Nurses in Connecticut

Laboratories Again Outgrow Quarters

Spreading Health Over Map of Connecticut

Bacteriological Nomenclature

News Notes From the Field

Summary of Laboratory Activities for January, 1927

Births, Deaths, Marriages for December, 1926

Incidence of Preventable Diseases for January, 1927

New Low Death Rates

STANLEY H. OSBORN, M. D., C. P. H., Commissioner

ISSUED BY
State Department of Health
HARTFORD

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Acceptance for mailing a special rate of postage provided for in section 1103. Act Oct. 3, 1917, authorized Oct. 17, 1922.

THE TELEPHONE NUMBER OF THE

STATE DEPARTMENT OF HEALTH

8 WASHINGTON STREET, HARTFORD, CONN.

DURING GENERAL OFFICE HOURS 9 A. M.-5 P. M.

IS 2-2205

TO GET THE LABORATORY

SUNDAY AFTERNOONS, SUNDAY MORNINGS AND

HOLIDAYS

CALL 2-9267

CONNECTICUT

HEALTH BULLETIN

Vol. 41 February, 1927 No. 2

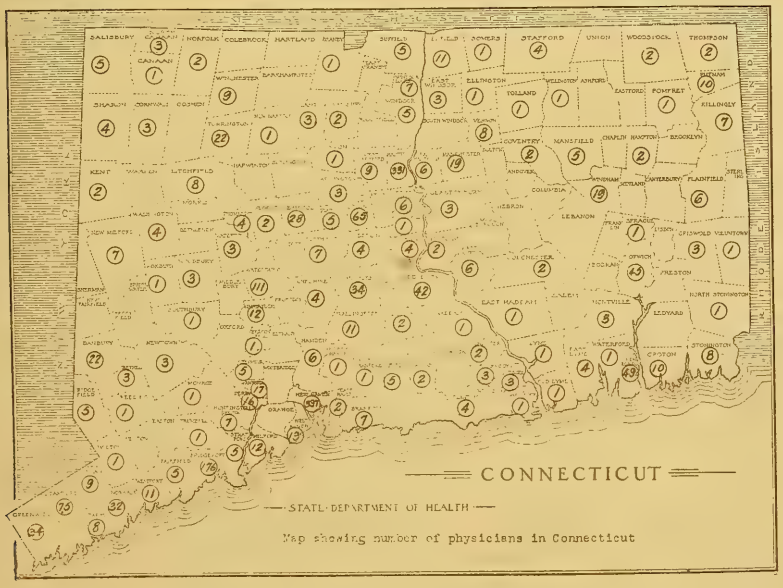
Issued Monthly by the

STATE DEPARTMENT OF HEALTH

PHYSICIANS, DENTISTS AND PUBLIC HEALTH NURSES IN CONNECTICUT

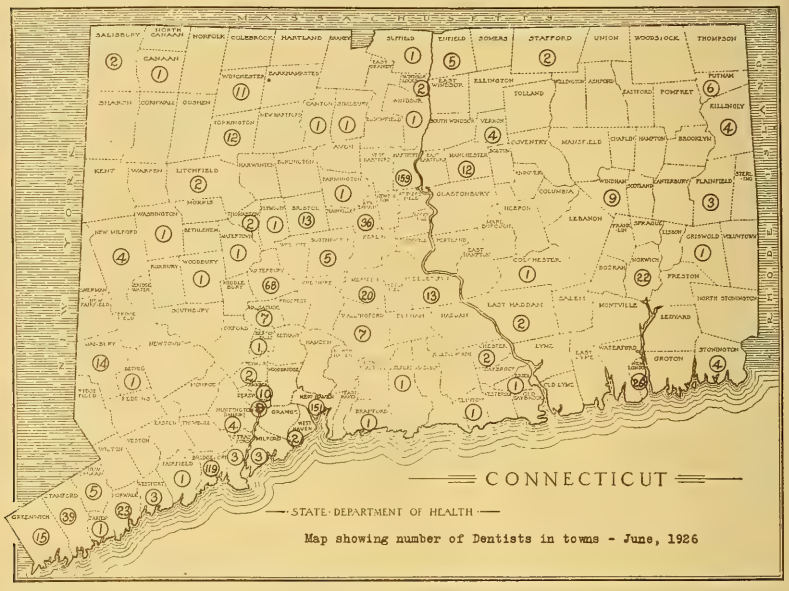
Connecticut has had for five years a remarkably low death rate and the year of 1926 has been no exception. (See back cover). However, with the growth of cities and the construction of good roads, some of the smaller communities of the state that have had physicians are now without a resident physician.

The person who has some chronic illness where there is no necessity of a prompt visit by a physician does not feel seriously the lack of a physician's care in the community without a resident doctor, but in emergencies where prompt attention is necessary the lack of a resident physician is seriously felt.



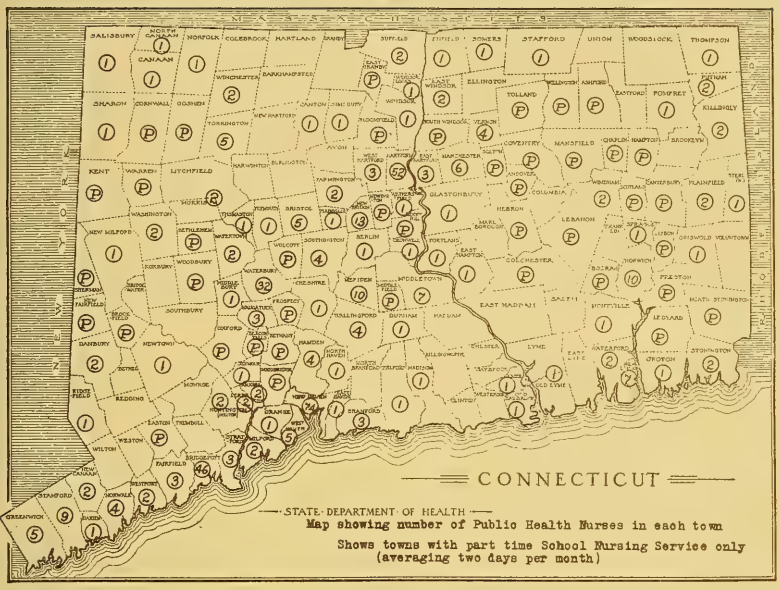
Map showing number of physicians in Connecticut

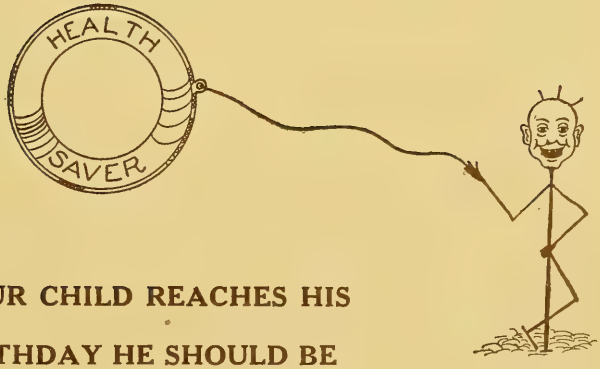
In making a survey of the towns in the state that have resident dentists, physicians and nurses, it was found that 43 towns, or 24 per cent of all towns in the state, are without resident doctors. Some of these towns, however, do not feel this lack so keenly where there is a resident physician in a village or neighboring town, who may be almost on the border.



There are 95 towns without a resident dentist. The maps on pages 27, 28 and 29 show the communities of the state that have physicians, nurses and dentists. The Public Health Nurse has been of great assistance to the physicians of many communities of the state and to the people in the towns where they are working.

There are 90 towns with community public health nurses and many of the remaining 79 communities would like to have public health nurses but are not financially able to stand the cost of such nursing service.


CONNECTICUT
STATE DEPARTMENT OF HEALTH
Map showing number of Public Health Nurses in each town
Shows towns with part time School Nursing Service only
(averaging two days per month)



WHEN YOUR CHILD REACHES HIS FIRST BIRTHDAY HE SHOULD BE IMMUNIZED AGAINST DIPHTHERIA BY TOXIN-ANTITOXIN.

ACTIVITIES OF THE LABORATORIES

The visitor who mounts the stairs with samples for examination at the Bureau of Laboratories, and lingers awhile to watch proceedings, will note with interest that its quarters have again expanded. It was not so long ago that the Bureau of Laboratories moved from New Haven into its present quarters at 247 Pearl Street, Hartford, where it occupied the second and a portion of the third floor of an industrial building. It was recognized at that time, July 1924, that the two entire floors would be needed should the work expand as it gave promise of doing.

The Need for Expansion

Since that day increased demand for laboratory service has come from every part of the state, and includes each type of its work. Health officers have learned that to make use of its facilities in diagnosing specimens and examining samples is to further the health and sanitation of their own communities. Physicians appreciate its prompt diagnosis of disease specimens, and prompt reporting of results, often by telephone, as an important factor in their treatment of special cases.

Since the laboratory was moved to Hartford it has been in closer touch with the Commissioner on Domestic Animals, the Dairy and Food Commissioner and with the other bureaus of the State Department of Health, each of which has been responsible for increased laboratory service. Since April of the present year the number of milk examinations have increased 136 per cent over the same period last year. This is due to a special study of the quality of milk served to school children in Connecticut towns being made by the American Child Health Association in co-operation with the Dairy and Food Commissioner and the State Department of Health. As at least four and in some instances five determinations are made on all milk examinations, this represents an even greater increase in work.

Likewise there has been an increased examination of water samples, especially during the months when the inspectors from the Bureau of Sanitary Engineering have made surveys of summer camps, indoor swimming pools, and roadside water supplies. Since July, 1925, oysters and water samples from oyster bed areas have been regularly examined at the laboratory as a result of the field activities of the department inspectors. As inspection of such areas must be made before

certificates can be issued to oyster growers in Connecticut, this alone has brought much extra work to the laboratory during the summer months.

The increase in water samples from April to November, 1926, over the same period in 1925 represents nearly 60 per cent.

In the serological section there has been, in 1926 over 1925 a 28 per cent increase in blood examinations for syphilis. This is the result of better reporting of these diseases by the physicians in the state which has been stimulated by the Division of Venereal Diseases.

Enlarged Working Space

To meet this growing demand for service the laboratory in September obtained approval for an extention of its working space. Some 1,600 square feet were added thus giving the laboratory a total of 5,400 square feet of space and control of the second and third floors of the present building. With this addition rearrangements have been effected whereby each branch of the work has been placed advantageously as to light and special needs and in less congested space. The serological division has been moved to larger and better quarters on the third floor. This will take care of the increasing number of blood specimen examinations for syphilis, and provide facilities as well for making the Kahn precipitation test to diagnose the disease.

A large room is now available for investigational work, particularly for use where outbreaks or epidemics of contagious diseases occur. The bacteriological work, or diagnostic division, is for the first time at work in quarters which adequately meet its needs, though it will not allow for much additional expansion.

Examinations of sewage and sewage effluent from municipal and institutional sewage plants are now easily made through the installation of an extra work table, sink and equipment in the chemical division which is now even better equipped than ever before.

During October nearly 1,500 thermometers were received for examination. Even with the present expansion of laboratory work it is still only possible to handle 96 thermometers a day and that requires the full time of one experienced worker with a part time assistant. It has required special effort to complete these examinations.

The section devoted to animal inoculation, and removal of brains from dogs and animals that have died in cases of suspected rabies has now advanced to a separate room. This

was previously carried on in a section partitioned off from the laboratory kitchen. The room is now much larger and in a more desirable location.

Each new laboratory section has been equipped with work tables, cabinets with drawers, outlet for gas and electricity and sinks with hot and cold water. The laboratory kitchen where media are prepared and equipment sterilized is much larger and has better light and ventilation.

Those not familiar with laboratory technique can hardly appreciate the immense amount of equipment that must be handled in the cleaning and sterilization processes. With the increased work of the laboratory the dish washing, media making and sterilizing has proportionately increased. This has taxed to the utmost the staff which is still small but have shown a willingness to co-operate in the face of difficulty. Their excellent spirit is worthy of commendation.

Much pride is shown in the storage and shipping rooms where storage needs are well met. Likewise for the first time a room has been provided for the storage of office forms and reports. This has been badly needed for a number of years. The laboratory office is still very cramped for room and office desks are not yet available for all stenographers, but it was not possible at this time to provide more office space or equipment.

Four workers have been added to the staff. Had the increased space and personnel not been provided the laboratory could not have handled the striking increase of work they have been called upon to do since July of the present fiscal year.

During the four months just passed 23,122 examinations were made, a total nearly double that of the four corresponding months of 1924, the first year the laboratories were located in Hartford. This number of examinations was greater by 3,823 than for the corresponding period of last year.

It is hoped that all health workers in Connecticut will become familiar with the laboratories through a personal visit. Tours of inspection of the laboratories are frequently arranged for interested groups of student nurses, visiting nurses, public health workers and college students in public health courses. To such groups lectures and demonstration of the laboratory activities have been given.

SPREADING HEALTH OVER THE MAP OF CONNECTICUT

By Elizabeth C. Nickerson

In September, 1923, the plan for spreading health information over the map of Connecticut gained headway when the Bureau of Public Health Instruction of the State Department of Health, authorized by the 1923 Legislature, began to function.

At that season of the year the agricultural fairs were in full swing. So there seemed no better place to start than by sending a health exhibit to these fairs which form the gathering places for so many thousands in rural sections. Selling the idea of a health exhibit to the fair officials was soon accomplished, and the big white health tent was on its way to blaze the health trail across the state.

The health tent furnished much food for thought through its moving pictures, its posters, its exhibits, its well trained leaders who were ready to throw light on many perplexing health problems. Parents learned the way to keep their children healthy, watched with interest while they were weighed, and became convinced of the importance of frequent health examinations for their children. Adults learned the value of promoting their own health through right food and personal hygiene, to the end that the prime of life may be extended into the period of old age. The control of preventable diseases was emphasized, and many gained the information from this authoritative source that vaccination is the only protection against smallpox and that diphtheria can be safely prevented by the use of toxin-antitoxin.

People came away from these exhibits with the health idea firmly planted in their minds and the determination to seek still further help from the local health activities in their own communities. The response to this initial health instruction was instantaneous; people flocked to the tent at every fair, and during the season many invitations came to exhibit elsewhere. It was during this time that the seed was dropped, out there in the field, that health was of vital importance, that the State Department of Health had a wealth of illustrative material to loan, and a well trained staff ready to assist local leaders who needed help in putting over their health programs. It was interesting to watch this idea grow. "Never knew anything about the State Department of Health". "If they can put out educational material like this we can make use of it". "Do you mean to say that all these leaflets are free? Why they look quite readable, guess I'll take a set for winter reading". "I thought health was always dry read-

ing. These leaflets are actually pleasant looking, so short and to the point. I can see right away that they can answer many of the questions about health that I have been wondering about". "You say you have speakers to help us with meetings?" "Seems to be a new idea, this health exhibit; health used to be such a mournful subject all about deaths and disease—this seems to suggest that attaining health is really fun. I do like this point of view". And so on as the various types of people visited the health tent and reacted to it.

Since that first year three other successful fair seasons for health have passed making a total of 30 different fairs attended. Eight of these have been attended twice, and six of them three times which represents from 1923-26 attendance at 49 fairs and 98 days of exhibiting. These have reached the four corners of the state, and larger groups each year, the numbers increasing from over 17,000 the first year to over 25,000 in 1926. In four seasons over 80,000 people have been reached by these health exhibits at fairs.

Health Instruction Program

After the initial effort was made a definite program for health instruction was launched. This included a widespread use of health illustrative material—moving picture films, stereopticon slides, posters, and health talks to be given by the staff. Knowing that local health activities could progress only to the extent to which local communities were health informed, it was the aim to reach the people in as many communities as possible. Educating the people along health lines is essential to the success of a local diphtheria immunization campaign, a smallpox vaccination drive, extension of public health nursing, child hygiene activities, control of preventable diseases, protection of the water supply, and other activities all of which as a composite whole make for "a clean state and a healthy people".

To assist local health officials along this line announcements were sent and a "Health Service Bulletin" was issued describing the material which was available from the State Department of Health. There was instantaneous response to this and soon films, slides, posters and exhibits were requested by organizations all over the state, while the staff was kept busy giving talks thus carrying the health message directly to local groups—granges, parent-teacher associations, mothers' clubs, men's clubs, schools and local leaders who wished to be kept up to date on health matters. As many of the smaller towns had previously done very little to in-

struct their communities in health promotion through prevention of disease, such assistance was welcomed as a popular means of dispelling false notions about disease.

To show how widespread this interest has been, during the last three years some form of health instruction has been sent to 158 towns and villages in the state. These were distributed in the eight counties as follows:

Towns Using Health Instruction Material

September, 1923, to December, 1926

Fairfield County	17
Hartford County	34
Litchfield County	23
Middlesex County	16
New Haven County	23
New London County	20
Tolland County	10
Windham County	15

The response from the smaller towns has been gratifying since an effort has been made to reach those outlying sections which have less opportunity to receive up to date health information than have the cities with their larger number of active organizations.

Films Spread Health Message

The health films have enjoyed wide popularity being used by every type of organization, churches, granges, parent-teacher associations, school assemblies, mothers' groups, men's organizations, hospitals, visiting nurse associations, high school science classes and public moving picture theatres. They have successfully fitted into local health programs, emphasizing now one phase of health and now another. So great has been the demand that booking certain films, of which we have only one copy, has been a distinct problem at times. For instance, the diphtheria film which is a popular plea for immunization has been in constant use to educate local communities to an active immunization campaign.

Some people in the state had no means of using films since there was no moving picture equipment at their disposal. To assist such groups a fireproof booth was constructed with the approval of the State Police at whose hands such equipment is licensed. This was sent into the rural sections on request, together with the moving picture machine and operator. Since January, 1924, and up to the present time this has been used 75 times, the five dollar fee required by the state law for police inspection being paid by the local community each time.

Previous to 1923 no special record was kept of the use of films or other illustrative material. With the installation of a record system, however, it is now possible to find out which films have been used in each town, by what organization, and how many people were reached. Thus we know that from September, 1923 to December, 1926, there have been 1,347 film showings in Connecticut covering all parts of the state. These have reached over 375,000 people during this time.

Health Slides and Posters

Many new health slides have been added to the original list during the last three years so that now a fairly adequate list is available from which to choose slides for any occasion. These, like the other illustrative material are loaned to people in the state. They are more and more being used by the staff to lend emphasis to their health talks. To show how this service has increased, in 1923-24, 2,157 slides were used; in 1924-25, 3,315; while in 1925-26 they reached 6,258 making a total of 11,730 for the three years. Likewise some four thousand posters have been in use, most of these over periods of two weeks to one month.

Speaker's Service

There has been an increasing demand for health talks throughout the state. Never has there been a time when health information from an authoritative source was more needed. The subject, health, has spread like wildfire over the country, and under its name an amazing amount of popular and, oftentimes, unscientific information has been disseminated by people who know little about the subject. For this reason, and to dispel widespread false notions about disease, local groups have welcomed the services of the speaker's bureau in order to present to their members correct information on the prevention and control of disease, child and maternal hygiene, and promotion of health among adults.

Over seven hundred talks have been given during the last three years reaching more than 50,000 people. In 1924, series of talks were given to the nurses in training at Meriden, Middletown, New London, and Waterbury hospitals. In 1925-26 this course was again offered and given wholly or in part at Winsted, Norwich, Danbury, Waterbury and Stamford hospitals. Such a course is now being given at St. Francis Hospital, Hartford, St. Mary's Hospital, Waterbury, and at Derby. Thus are potential leaders made familiar with public health problems.

During 1925-26 health information, covering every phase of the subject, was delivered to the very doors of the people through a series of radio messages broadcast over W. T. I. C.

Health Exhibit at Sesqui-Centennial

Special Health Exhibits

In line with modern advertising methods the health exhibit has become an important factor in reaching the people. There has been a growing interest in the work of each of the state departments. So, for the Midwinter Exposition, Hartford, in 1924, and for the State Fair in 1925 and 1926 special exhibits were prepared, so that the people could get a bird's-eye view of health activities and some of the results accomplished. It was more than a cursory glance that the people gave to these exhibits; they studied them carefully, asked leading questions about points of interest, and helped themselves to the leaflets. At these three special health exhibits upwards of thirty-five thousand have been in attendance, representing all parts of the state. About one hundred and fifty thousand leaflets have been distributed at these and other health exhibits.

In May, 1926, an extensive health exhibit was prepared for the Sesqui Centennial at Philadelphia to be used in the Connecticut Building. This exhibit consisted of panels of progress showing the health activities of each bureau and division. The center panel gave high lights in Connecticut health history since 1878. The exhibit was colorful with spot maps, colored charts and lighted transparencies, while attention was directed to it by means of flashing signs and a mechanical book, on whose pages appeared large photographs of field activities. One incident in connection with this exhibit serves to show that it created more than passing interest. A delegation of health officials from the Balkan States guided by the International Health Board insisted, after seeing the exhibit, upon changing their tour of health inspection in the United States so that a visit to the Connecticut State Department of Health might be made.

Health Publications

In the program for health instruction an effort has been made to make the weekly and monthly bulletins more effective weapons for carrying the messages. So articles are written in more popular style with the hope of stimulating real interest among their readers. That this has been accomplished is shown by the growing demand for them, by the frequent requests for extra copies of special articles, by the fact that articles are copied by the press, and called to the attention of the public in public places by local health officials.

Health instruction through special leaflets, which now number over one hundred, is carried on through various channels.

They are used in connection with talks, at meetings, at health exhibits and distributed by the local health officers. At fairs alone over 125,000 have been distributed.

Measuring the Results

It is difficult to measure results from health instruction. But, if an increasing demand for health assistance along all lines is an indication, the people in the state are now wide awake to the advantages of health instruction.

The speakers on health are in great demand as authoritative health information is recognized as of real value in dispelling false ideas about health and in promoting the new ideas of prevention of disease. Every type of organization in the state has secured this service.

The growing use of films, slides and posters is an indication that people are beginning to appreciate the importance of illustrative material in connection with their health work.

Health exhibiting is assuming large proportions as a factor in presenting health work. Not only through the fair season but in all parts of the state during the winter months assistance in planning exhibits is becoming an increasing part of our work.

BACTERIOLOGICAL NOMENCLATURE ACCORDING TO BERGEY'S MANUAL AS IT RELATES TO NAMES MOST FREQUENTLY USED IN BUREAU OF LABORATORIES

By Friend Lee Mickle

The Bureau of Laboratories in its reports and correspondence in the future will adopt the nomenclature for bacteria and related organisms that has been in use for several years in educational institutions teaching bacteriology and which, during the past few years, has been gradually adopted by the better laboratories throughout the country. This should cause no confusion to persons receiving laboratory reports because the newer names have been used so frequently by many writers and scientific journals for the past few years that most physicians and health officers are already undoubtedly quite familiar with most of them.

It was necessary for the earlier writers and discoverers to classify bacteria solely on their appearence under the microscope and a detailed classification was not possible because their biologic characteristics were only gradually determined. When it became possible to grow bacteria on different food materials and study them in various ways there accumulated a larger knowledge of the characteristics of bacteria. So it finally became apparent that it was just as incorrect to group together all rod-shaped germs under a single genus separate and distinct from the round forms as to classify all four-footed animals under one classification. After years of study various workers proposed different classifications and for many years there was much confusion regarding names, and authorities differed over the correct nomenclature of many of our common disease-producing bacteria. In many instances common names were adopted for them that have come into general usage but many of them were far from being accurate. For instance, the organism that has become known as the tubercle bacillus is not, strictly speaking, a bacillus at all. Finally, a committee on classification was appointed by the Society of American Bacteriologists that reported a system of classification in 1917.

The final outcome of their work is the publication of Bergey's Manual of Determinative Bacteriology by Professor David H. Bergey of the University of Pennsylvania, assisted by the Committee of the Society of American Bacteriologists. That system of classification has come into more general use than any previous classification because it has been based on the principles underlying all biological nomenclature, and because it has the best thought of leading bacteriologists be-

hind it. A great deal of work has been done to trace each organism back to the first authoritative description of it and to assign names that would tend to group organisms into classes in which they rightly belong, at the same time giving credit in special titles to the discoverer of the organism or to the name assigned to it by the first person working with it or isolating it.

For convenience of those interested, there is given below a list of names of bacteria and related organisms most commonly used in reports sent out from the Bureau of Laboratories. Opposite the common name is given the new official name taken from Bergey's Manual and that is followed by the abbreviation of the official title that is now coming into use. In using these terms in publications it will, in many instances, be desirable for a time that the common name be used in parenthesis following the abbreviation of the official name.

Common Name	New Official Name Sponsored by the Society of American Bacteriologists	Abbreviation of Official Name
Anthrax bacillus or Bacillus anthracis	Bacillus anthracis	B. anthracis
Colon bacillus or Bacillus coli	Escherichia coli	E. coli
Diphtheria bacillus or B. diphtheriae	Corynebacterium diphtheriae	C. diphtheriae
Dysentery bacillus (Flexner type) or Bacillus dysenteriae Flexner	Ebertrella paradysenteriae	E. paradysenteriae
Dysentery bacillus (Shiga type) or Bacillus dysenteriae Shiga	Eberthella dysenteriae	E. dysenteriae Shiga
Enteritidis bacillus or Bacillus enteritidis	Salmonella enteritidis	S. enteritidis
Glanders bacillus or Bacillus mallei	Pfeifferella mallei	P. mallei
Gonococcus	Neisseria gonorrhoeae	N. gonorrhoeae
Meningococcus	Neisseria intracellularis	N. intracellularis
Paratyphoid A bacillus or Bacillus paratyphosus A	Salmonella paratyphi	S. paratyphi
Paratyphoid B bacillus or Bacillus paratyphosus B	Salmonella schottmuelleri	S. schottmuelleri
Staphylococcus (genus)	Staphylococcus	Staphylococcus
Streptococcus (genus)	Streptococcus	Streptococcus
Syphilis organism or Treponema pallidum	Treponema pallidum	T. pallidum
Tetanus bacillus or Bacillus tetanis	Clostridium tetani	C. tetani
Tubercle bacillus	Mycobacterium tuberculosis	M. tuberculosis
Typhoid bacillus or Bacillus typhosus	Eberthella typhi	E. typhi
Vincent's fusiform bacillus	Fusiformis dentium	F. dentium
Vincent's spirellum	Borrelia vincenti	B. vincenti

NEWS NOTES FROM THE FIELD

Physicians Licensed.
Hartford, Conn., Reynolds, Robert G., 190 Retreat Avenue.
New Britain, Conn., Peck, Eugene C., 42 Park Place.

Health Officer Appointed. The Hartford County Health Officer has announced the appointment of:

Carl J. Kilburn, M. D., of Collinsville, as health officer of Burlington, succeeding Mr. John D. Luby.

The Fairfield County Health Officer has appointed William S. Randall, M. D., as health officer of Shelton, succeeding Gould A. Shelton lately deceased.

The Litchfield County Health Officer has appointed W. Mary Haskins,, M. D., health officer of Bridgewater.

Laboratories Approved. Under the Sanitary Code (Reg. 40) laboratories found to conform to certain bacteriological standards are approved by the State Department of Health. Laboratories are also approved for milk examination under the State Statutes (Chap. 101, Sec. 2,482).

In January all certificates of approval are reissued if the same standards prevail. All laboratories so approved are listed below:

Approved Laboratories

City Department of Health, New Britain
Laboratories of Dr. Charles T. Beach, Hartford
Laboratories of Cheney Brothers, South Manchester
City Department of Health, Bridgeport
City Department of Health, Stamford
City Department of Health, Greenwich
Greenwich Hospital, Greenwich
Grace Hospital, New Haven
City Department of Health and Middlesex Hospital, Middletown
City Department of Health, New Haven
Meriden Hospital, Meriden
Newland's Sanitary Laboratory, Hartford
City Department of Health, Hartford
Travelers Insurance Company, Hartford*
Trinity College, Hartford
Charlotte Hungerford Hospital, Torrington
State Hospital, Norwich*

For Milk Examination

Mitchell Dairy Company, Carl A. Brandt, Bridgeport
City Department of Health, Waterbury
City Department of Health, Bridgeport
City Department of Health and Middlesex Hospital, Middletown
City Department of Health, Hartford
City Department of Health, New Haven*
City Department of Health, New Britain*
*New license

Laboratories

SUMMARY OF BUREAU ACTIVITIES FOR JANUARY, 1927

DIAGNOSTIC

	+	—	?	Unclassified	Total	
Typhoid	1	100	....	....	101	
Paratyphoid A	....	101	....	....	101	
Paratyphoid B	....	101	....	....	101	
Diphtheria	130	2,131	2	....	2,263	
Diphtheria Virulence	13	18	....	....	31	
Vincent's Angina	8	589	....	....	597	
Haemolytic Streptococci	33	567	....	....	600	
Tuberculosis	20	109	....	....	129	
Syphilis	239	1,697	216	....	2,152	
Gonorrhoea	18	103	....	....	121	
Pneumonia	6	2	....	....	8	
Malaria	....	3	....	....	3	
Rabies	1	8	....	....	9	
Special Specimens	3	9	....	47	59	6,275

CHEMICAL AND BACTERIOLOGICAL

Milk samples	271	
Water samples	184	
Ice samples	2	
Sewage samples	66	
Sea food samples	32	
Clinical thermometers	844	1,399
Total examinations made		7,674
Total specimens examined		4,917

LABORATORY CONTROL OF SEWAGE DISPOSAL PLANTS

During the month new equipment for examination of samples of sewage and sewage effluents has been installed and the Laboratories are beginning a program of examinations of samples from the municipal and institutional treatment plants throughout the State. For many years this department has been charged with the supervision of such treatment plants but the Bureau of Laboratories has not had sufficient equipment to assist materially in the work. For the next few months examinations will, of necessity, have to be limited to samples collected by the Bureau of Sanitary Engineering and by the State Water Commission. The surveys will later be extended as facilities permit.

Vital Statistics

MONTH OF DECEMBER

TOTALS TO DATE, TWELVE MONTHS, 1926, 1925, 1924

	Births	Birth Rate*	Marriages	Mar. Rate*	Deaths	Death Rate*
1926	28,879	18.5±.1	12,289	7.9±.08	18,301	11.7±.1
1925	29,801	19.5±.1	12,317	8.0±.08	17,686	11.6±.1
1924	31,782	21.1±.1	12,918	8.6±.08	16,991	11.3±.1

*Per 1,000 Population. Figures above include all late reports up to January 31, 1927.

The year of 1926 is completed. But it cannot be said that all records are in. Late births will be received at almost any time up to the next ten or fifteen years. A few late deaths and marriages will be received. However, on the totals at hand some very rough estimate of the vital statistics for the year may be given in advance of the analysis to be published in the next monthly bulletin.

The births decreased in number to such an extent that the rate fell off one whole point as compared with the rate of 1925 and 2.6 points referred to 1924. There is no simple way of accounting for this. Perhaps when the 1926 Registration Report is tabulated and published some figures may be discovered which will in part explain the decrease.

With respect to number of births reported, 1926 is 922 below 1925 and 2,903 below 1924.

The total number of marriages for the year were 12,289 differing by only 28 less than the 12,317 reported in 1925, but 629 less than the number reported in 1924.

So far, not including late reports, 18,301 deaths have been recorded, an increase of 615 over the 17,686 reported in 1925. This increase will very likely be made up of an increase in measles deaths and the pneumonias, all of which causes ran rather higher than usual in the early months of 1926. The rate for the year is 11.7, not an alarming increase over the 11.6 of 1925—in fact the increase is such as to give convincing evidence that the state was as healthy as in 1925. Since 1921 the annual death rate has been very low and in 1924 the record rate of 11.3 was established.

Births

During the month records of 2,163 births were received, 187 less than the 2,350 reported in 1925 and 601 less than the largest number reported in the last six years.

The birth rate for the month was very low again, being only 16.6 but not as low as the rate of 15.9 for November. In order that some idea may be gained as to the falling off of births, the rate was 23.3 in 1921, giving 1926 a monthly rate, annual basis, nearly 7 less than 1921. Applying this difference to the population of 1926 will result in very nearly 11,000 fewer births. It must be remembered, however, that one month, namely, December, is assumed to represent the entire year.

The towns in the state having a population of 5,000 or over number 48. Of these towns 19 reported more births in 1926 than in 1925, but only the following 6 report increases of 10 or more:

Danbury 10±8	Torrington 14±8
Hartford 38±25	Waterbury 17±19
Norwich 20±10	Windham 19±7

The figures which immediately follow each town are made up of two parts. In the figures, for instance say Windham, note 19±7; the 19 means the actual increase; the 7 means either an increase or decrease which might arise from the operation of pure chance. No increase is of importance unless it is at least twice the value of the variation, or dispersion, which might arise from pure chance. With this as criterion the increases for Norwich and Windham seem to be of significance while the increase for Torrington is on the borderline. The other increases are only such as might arise out of normal fluctuation from year to year.

Stillbirths

Records of 89 stillbirths were received. Adding these to the living births gives a total of 2,252 from which it will appear that the rate of stillbirths was 39.5 per 1,000 total births. In 1925 there were also 89 stillbirths among 2,439 total births, or at a rate of 36.4 per 1,000 total births. The increase in rate of 3.1 is of no significance because it has associated with it a chance variation of nearly ±6.0.

Of the 89 stillbirths this year, that is to say for 1926, 51 were males and 38 were females giving a sex ratio of 134 males to 100 females.

Deaths

It had been hoped that the death records for December would have been lower by a considerable number than in 1925, but such hope was not to be. While the actual increase was only 42 and not of significance, still the ambition of a lower death rate for 1926 compared with 1925 was eliminated.

On the whole, with reference to the past six years, the rate for 1926 was somewhat higher for the month than the average. This is perhaps due in part to the fact that winter began very early. There being heavy snow on the 6th of the month, with more snow throughout the rest of the month and relatively continued cold.

With respect to certain diseases the following table has been drawn up enabling a comparison of 1926 with 1925.

Cause of Death	1926	1925	Increase	Decrease
Diseases of heart	287±17	267±16	20±23	....
Epidemic encephalitis	1± 1	3± 2	....	2± 2
Pneumonia undefined	0	0	....	....
Typhoid fever	1± 1	6± 2	....	5± 3
Measles	2± 1	12± 3	....	10± 4
Scarlet fever	2± 1	4± 2	....	2± 2
Whooping cough	2± 1	6± 2	....	4± 3
Diphtheria	13± 4	15± 4	....	2± 5
Influenza	35± 6	35± 6	....	....
Tuberculosis pulmonary	91±10	75± 9	16±13	....
Tuberculosis other forms	18±14	15± 4	3± 6	....
Cancer	153±12	141±12	12±17	....
Cerebrospinal meningitis	0	1± 1	....	1± 1
Poliomyelitis	1± 1	1± 1	....	....
Pneumonia lobar	88± 9	94±10	....	6±14
Pneumonia broncho	73± 9	83± 9	....	10±12
Diarrhoea and enteritis (Under 2)	10± 3	21± 5	....	11± 6
Puerperal diseases	18± 4	9± 3	9± 5	....
Accident	95±10	92±10	3±14	....
Suicide	15± 4	15± 4	....	....
Homicide	1± 1	2± 1	....	1± 1
Other causes	695±26	662±26	33±37	....
Total	1,601±40	1,559±39	96	54

Examining first the increases none is to be found which is of significance and which might not have arisen from chance fluctuation, except possibly the unfortunate increase in puerperal diseases.

Of the decreases, several are worthy of note. There was a very significant decrease in deaths from typhoid fever. Measles also decreased and when it is recalled how prevalent this disease was in January, February and March of 1926, it may be guessed that the relatively high number of deaths in December, 1926, compared with 1925 was a forerunner of the mortality experience to come in later months of 1926. The indication, therefore, seems to be that there will be fewer deaths during 1927 from measles.

There were also significantly fewer deaths from diarrhoea and enteritis under 2.

The accidental deaths include 21 deaths due to automobile accidents as compared with 32 in 1925.

FOR SIX YEARS—DECEMBER, 1926

CONNECTICUT	1921	1922	1923	1924	1925	1926
BIRTHS	2764	2423	2409	2507	2350	2163
Birth Rate	23.3	20.1	19.6	20.0	18.4	16.6
MARRIAGES	715	733	796	732	630	599
Marriage Rate	6.0	6.1	6.5	5.8	4.9	4.6
DEATHS	1425	1618	1396	1463	1559	1601
Death Rate	12.0	13.4	11.4	11.7	12.2	12.3
COMMUNICABLE DIS.* DEATHS	139	189	170	154	155	147
Per Cent to Total Deaths	9.8	11.7	12.2	10.5	10.0	9.2
DEATHS UNDER 1 YEAR	180	211	168	159	180	160
Rate Per 1,000 Births	63.2	80.9	65.5	60.1	72.5	66.6

*Includes Typhoid Fever, Measles, Scarlet Fever, Whooping Cough, Diphtheria, Tuberculosis Pulmonary, Cerebrospinal Meningitis, Poliomyelitis, Influenza.

Births, Marriages and Deaths

Statistics December, 1926

	Population Est. as of July 1, 1926 Based on U. S. Census	TOTALS				DEATH RATES			AGE GROUPS		
		Births	Stillbirths	Marriages	Deaths	All Causes (per 1,000 population)	Tuberculosis (per 1,000 population	Children under 1 year (per 1,000 births	Under 1 year	1 to 5 years	65 years and over
State of Connecticut	1,558,996	2163	89	599	1601	12.3	0.7	66.6	160	52	609
Ansonia	19,291	19	1	5	16	9.9	.....	125.0	3	.....	7
Branford	7,014	5	.....	1	4	6.8	.....	196.7	2	.....	1
Bridgeport	170,717	245	12	57	148	10.4	0.9	47.0	12	11	32
Bristol	25,354	45	5	7	23	10.9	.....	121.2	6	.....	3
Danbury	21,931	37	1	10	44	24.1	.....	68.4	3	1	26
Derby	12,732	23	.....	5	10	9.4	0.9	28.3	1	1	3
East Hartford	13,950	12	.....	3	5	4.3	0.9	.....	.....	1	2
Enfield	13,039	20	.....	10	11	10.1	.....	170.2	4	2	2
Fairfield	15,041	7	.....	1	11	10.1	0.8	.....	.....	.....	3
Glastonbury	6,124	5	.....	2	3	5.9	1.9	164.3	1	1	.....
Greenwich	25,790	28	6	27	33	15.4	1.9	52.5	2	1	13
Groton	11,045	7	.....	3	9	9.8	.....	.....	.....	.....	7
Hamden	10,434	16	.....	7	11	12.7	2.3	285.7	4	.....	5
Hartford	164,228	342	18	73	193	14.1	0.5	72.8	24	4	58
Killingly	9,218	13	1	1	7	9.1	.....	.....	.....	1	4
Manchester	21,505	27	1	7	12	6.7	1.1	.....	.....	2	3
Meriden	36,529	55	2	13	44	14.5	.....	63.7	4	1	15
Middletown	22,891	39	3	11	62	32.5	2.1	123.7	6	1	24
Milford	14,073	11	1	3	16	13.6	0.9	90.9	1	.....	8
Naugatuck	16,589	12	.....	4	5	3.6	.....	.....	.....	1	2
New Britain	69,482	116	2	24	52	9.0	1.2	86.7	12	2	15
New Haven	181,823	263	6	87	194	12.8	0.3	43.9	14	8	64
New London	29,566	51	1	22	43	17.5	0.4	32.3	2	.....	21
Norwalk	29,859	45	3	16	44	17.7	0.4	74.4	4	2	25
Norwich	30,576	67	1	10	48	18.8	0.4	155.8	10	.....	18
Plainfield	8,694	15	1	3	15	20.7	.....	240.0	3	.....	7
Plymouth	6,364	4	.....	.....	3	5.7	.....	.....	.....	.....	2
Putnam	9,105	11	.....	7	13	17.1	.....	60.9	1	.....	6
Seymour	8,116	5	1	1	8	11.8	.....	120.0	1	.....	3
Shelton	11,398	12	.....	1	17	17.9	.....	.....	.....	.....	6
Southington	9,727	9	1	4	5	6.2	.....	.....	.....	.....	4
Stafford	5,454	10	2	5	7	15.4	.....	.....	.....	.....	6
Stamford	47,373	66	1	18	52	13.2	.....	106.7	10	1	16
Stonington	10,930	5	.....	2	12	13.2	.....	.....	.....	.....	8
Stratford	16,768	15	.....	3	9	6.4	.....	114.8	2	.....	2
Thompson	5,203	7	1	1	2	4.6	.....	.....	.....	.....	1
Torrington	24,929	43	1	6	17	8.2	1.4	48.9	2	.....	5
Vernon	8,787	13	.....	6	12	16.4	.....	85.1	1	.....	9
Wallingford	12,571	1	.....	4	12	11.5	.....	85.7	1	.....	10
Waterbury	104,047	180	4	33	87	10.0	0.9	37.9	7	3	29
Watertown	7,359	5	1	1	3	4.9	.....	.....	.....	.....	3
West Hartford	11,562	13	.....	4	17	17.6	.....	135.5	2	.....	7
West Haven	18,334	25	1	7	21	13.7	.....	63.0	2	.....	5
Westport	5,685	3	.....	2	5	10.6	.....	.....	.....	1	1
Wethersfield	5,141	4	.....	3	3	7.0	.....	.....	.....	.....	2
Winchester	9,024	13	2	5	11	14.6	.....	66.7	1	.....	6
Windham	14,391	37	1	11	19	15.8	1.7	74.5	2	1	5
Windsor	6,584	3	.....	1	4	7.3	.....	.....	.....	.....	1
Towns under 5,000	212,599	149	8	62	199	11.2	0.2	40.6	10	6	104

DEATHS FROM IMPORTANT CAUSES

Diseases of the Heart	Encephalitis Epidemic	Pneumonia Undefined	Typhoid Fever	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Influenza	Tuberculosis-Pulmonary	Tuberculosis Other forms	Cancer	Meningitis-Cerebrospinal	Poliomyelitis	Pneumonia—Lobar	Pneumonia—Broncho	Diarrhoea-Enteritis Under 2	Puerperal Diseases	Accident	Suicide	Homicide	Institutional Deaths	Non-resident Deaths
287	1	.....	1	2	2	2	13	35	91	18	153	.....	1	88	73	10	18	95	15	1	567	271
3	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1	.....	.....	.....
21	.....	.....	.....	.....	1	.....	.....	4	9	5	17	.....	.....	11	3	1	1	16	2	.....	68	16
.....	.....	.....	.....	.....	1	.....	1	1	.....	.....	5	.....	.....	1	.....	1	.....	2	.....	.....	3	.....
11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	.....	.....	4	1	.....	.....	3	2	.....	17	7
3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....	6	4
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....	.....	.....	.....	1
1	.....	.....	.....	.....	.....	.....	1	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
3	.....	.....	.....	.....	.....	.....	.....	1	1	1	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....	3
.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
4	.....	.....	.....	.....	.....	.....	.....	2	4	.....	3	.....	.....	1	1	.....	1	4	.....	.....	11	5
2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1	.....	.....	.....	.....	.....	.....	.....	2	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	2
38	.....	.....	.....	.....	.....	.....	1	1	5	.....	25	.....	.....	12	9	2	2	14	2	.....	108	47
1	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	2	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
3	.....	.....	.....	.....	.....	.....	1	.....	2	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	6	1
7	.....	.....	.....	.....	.....	.....	.....	2	2	.....	7	.....	.....	6	1	.....	.....	2	1	.....	16	3
9	.....	.....	.....	.....	.....	.....	4	.....	3	2	.....	.....	.....	4	3	.....	1	7	.....	.....	44	35
3	.....	.....	.....	.....	.....	.....	.....	1	1	.....	3	.....	.....	1	.....	.....	.....	.....	1	.....	1	2
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
4	.....	.....	.....	.....	.....	1	.....	2	3	.....	6	.....	.....	1	4	1	1	6	.....	.....	12	1
37	1	.....	1	.....	.....	.....	1	.....	5	3	17	.....	.....	9	14	.....	7	5	1	.....	103	28
12	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	6	.....	.....	2	3	1	.....	3	.....	.....	14	14
6	.....	.....	.....	.....	.....	.....	.....	4	.....	.....	2	.....	1	4	1	.....	.....	1	.....	.....	11	6
8	.....	.....	.....	.....	.....	.....	.....	.....	6	1	4	.....	.....	1	5	.....	1	1	.....	.....	17	9
6	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....	1	1	.....	.....	1	.....	.....	.....	1
1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1	.....	.....	.....	.....	.....	.....	1	1	1	1	1	.....	.....	1	.....	.....	.....	1	.....	.....	3	1
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1
2	.....	.....	.....	.....	.....	.....	.....	1	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7	7
3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	2	.....	.....	.....	.....	.....	3	1
10	.....	.....	.....	.....	.....	1	.....	2	3	1	4	.....	.....	1	4	1	1	6	2	.....	12	2
5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....	1	1
1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	2	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	1
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1	.....	.....	.....	.....	.....	.....	1	2	2	.....	1	.....	.....	1	1	.....	1	2	.....	.....	4	3
3	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	1
2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	1	.....	.....	.....	.....	.....	5	.....
16	.....	.....	.....	.....	.....	.....	.....	2	5	1	8	.....	.....	6	2	.....	2	6	1	.....	40	16
1	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
5	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1	2	1	.....	2	1	.....	4	3
1	.....	.....	.....	.....	.....	.....	.....	1	6	.....	4	.....	.....	1	1	.....	.....	1	.....	.....	8	6
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	2	2
2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	1	.....	.....	.....	.....	.....	5	1
1	.....	.....	.....	.....	.....	.....	.....	1	1	.....	2	.....	.....	.....	2	.....	.....	.....	.....	.....	5	3
2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1	.....	.....	.....
41	.....	.....	.....	1	.....	.....	.....	2	17	1	16	.....	.....	12	7	.....	.....	7	.....	.....	29	36

Preventable Diseases

INCIDENCE OF DISEASE FOR MONTH OF JANUARY, 1927

(As compared with previous years)

A comparison of the daily morbidity reports received during the month of January, 1927, with the corresponding month for the years 1922, 1923, 1924, 1925 and 1926.

DISEASE	Average 1921-1925 for January	Mean 1921-1925 for January	1922	1923	1924	1925	1926	1927
Cerebrospinal Meningitis	4	5	4	8	1	5	....	5
Diphtheria	275	274	369	299	274	246	185	140
Encephalitis Epidemic	3	4	....	2	3	6	4	4
Measles	1,230	809	442	2,066	809	231	2,600	145
Poliomyelitis	1	1	1	1	1	2	....	2
Scarlet Fever	549	459	396	459	741	810	338	430
Smallpox	20	95	95	4	2	....	....	....
Typhoid Fever	10	8	8	7	8	15	12	12
Tuberculosis Pulmonary	124	121	90	119	167	121	122	114
Whooping Cough	305	313	224	350	313	306	332	242

A comparison of the morbidity on these diseases for the two preceding months, November and December with the January record is as follows:

	November	December	January
Cerebrospinal Meningitis	2	2	5
Diphtheria	111	123	140
Encephalitis Epidemic	3	4	4
Measles	58	225	145
Poliomyelitis	1	2	2
Scarlet Fever	229	288	430
Smallpox	....	....	....
Typhoid Fever	10	8	12
Tuberculosis Pulmonary	106	89	114
Whooping Cough	175	163	242

Cases of Other Reportable Diseases

Chickenpox	507	Septic Sore Throat	13
Conjunctivitis Infectious	2	Trachoma	1
Encephalitis Epidemic	4	Gonorrhoea	115
German Measles	16	Syphilis	99
Influenza	97		
Mumps	143	Total	999
Paratyphoid Fever	2		

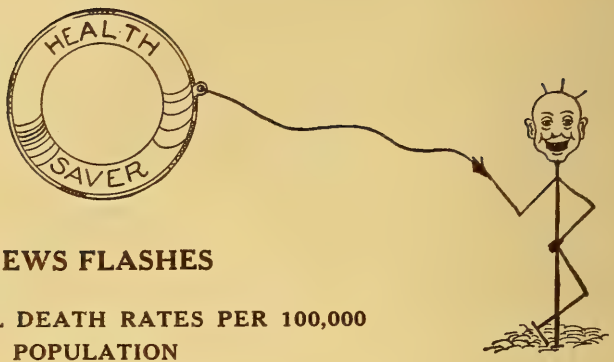
Cases of Occupational Diseases

Fulminate of Mercury Rash	1	Toxic Dermatitis	1
Conjunctivitis from Fulminate	1	Total	3

Cases of Certain Reportable Diseases

January, 1927

	Population Est. as of July 1, 1926	Typhoid Fever	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Meningitis Cerebrospinal	Poliomyelitis	Pulmonary Tuberculosis	Other Forms Tuberculosis	Pneumonia Lobar	Broncho-Pneumonia	Other Com. Diseases
State Total	1,586,435	12	145	430	242	140	5	2	114	17	206	166	999
NEW HAVEN CO.	**475,419**	**4**	**7**	**84**	**11**	**37**	**1**	**1**	**33**	**5**	**41**	**33**	**353**
New Haven	184,727		2	24	2	2			18	4	15	6	176
Waterbury	105,960	3	1	11		13			6		10	7	19
Meriden (city and town)	36,807		2	29	8	6			5		10	11	69
Ansonia	19,548		1			2					1		
Orange (inc. West Haven)	18,834		1	3	1	1			2			4	2
Naugatuck	16,829					4							
Wallingford (town and boro)	12,659												
Milford	14,613			7					1	1	3	1	7
Derby	12,963												
Hamden	10,718	1		8							1	1	37
Branford (town and boro)	7,073					6	1		1		1		3
Seymour	8,321					2							
Towns under 5,000	26,307			2		1		1				3	40
FAIRFIELD CO.	**379,505**		**31**	**209**	**81**	**40**	**1**		**29**	**4**	**74**	**26**	**162**
Bridgeport	174,890		16	78	1	30	1		22	3	20	14	40
Stamford (city and town)	48,515		11	30	33	3			1		12	3	29
Norwalk	30,173			30					1		9		12
Danbury (city and town)	21,931			1							1		
Greenwich (town and boro)	26,373		1	21	6				2		17	4	32
Stratford	17,451		1	6		2					5		
Fairfield	15,541		1	38		3					4	1	20
Shelton	11,699			1									1
Westport	5,772			2	3								3
Towns under 5,000	27,160		1	2	38	2			3	1	6	4	25
HARTFORD CO.	**402,344**	**3**	**56**	**90**	**99**	**31**	**2**		**38**	**8**	**63**	**85**	**299**
Hartford	168,258	2	4	32	12	10			19	4	29	44	131
New Britain	71,068		2	20	58	1	1		7	4	11	9	49
Bristol (city and town)	26,087		29	10	5	4			2		2	10	59
Manchester	21,992		1	6	2	8					2	4	18
Enfield	13,241					4					2	2	1
East Hartford	14,311		2	7	2				2		2	3	4
Southington (town and boro)	9,925	1		2	1		1		2		2		4
West Hartford	11,908		15	4	4	1			3		6	3	14
Windsor	6,732		1		4							3	3
Glastonbury	6,206			1							4		4
Plainville	5,064					1							
Wethersfield	5,264				1				1		1	1	
Towns under 5,000	42,288		2	8	10	2			2		2	6	12
NEW LONDON CO.	**114,930**	**2**	**1**	**23**	**22**	**10**			**6**		**11**	**10**	**56**
Norwich (city and town)	30,689	1		6	2	7					4	5	1
New London	30,149			6	2	2			1		1	2	20
Stonington (town and boro)	11,041		1	3									
Groton (town and boro)	11,326			1	2						4	1	33
Towns under 5,000	31,725	1		7	16	1			5		2	2	2
LITCHFIELD CO.	**80,900**	**1**	**1**	**4**	**10**	**9**			**4**		**1**	**1**	**70**
Torrington (town and boro)	25,316	1				8			1				
Winchester (inc. Winsted)	9,109												5
Plymouth	6,459		1										2
Watertown	7,506												
Towns under 5,000	32,510			4	10	1			3		1	1	63
WINDHAM CO.	**56,258**	**2**	**49**	**14**	**14**	**5**	**1**	**1**	**1**		**9**	**8**	**9**
Windham (inc. Willimantic)	14,418			13	2	5		1	1		2	2	1
Putnam (city and town)	9,220	1	10	1							3		
Plainfield	8,818		25				1					3	1
Killingly (inc. Danielson)	9,384		2									2	3
Thompson	5,226				8						1		1
Towns under 5,000	9,192	1	12		4						3	1	3
MIDDLESEX CO.	**49,279**				**2**	**5**			**1**		**6**	**3**	**36**
Middletown (city and town)	22,932					2							1
Middletown State Hospital									1				2
Towns under 5,000	26,347				2	3					6	3	33
TOLLAND CO.	**27,800**			**6**	**3**	**3**			**2**		**1**		**14**
Vernon (inc. Rockville)	8,751			1					1				2
Stafford (town and boro)	5,472				3	1					1		
Towns under 5,000	13,577			5		2			1				12



NEWS FLASHES

PROVISIONAL DEATH RATES PER 100,000 POPULATION

	1926	1925
Typhoid Fever	1.8	2.5
Diphtheria	5.3	8.4
Diarrhoea and Enteritis (Under 2)	16.0	18.5
All Causes	11.7	11.6

TYPHOID FEVER AND

DIPHTHERIA AT THE

LOWEST RATE EVER

RECORDED!

Library, Hygienic Laboratory,
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State of Connecticut Health Bulletin

"For a Clean State and a Healthy People"

Vol. 41 March, 1927 No. 3

This Issue Contains

Mortality in Connecticut 1922-1926

Kahn Test in Diagnosis of Syphilis

Carriers Excluded from Handling Oysters

News Notes from the Field

Allocation of Deaths

Births, Deaths, Marriages for January, 1927

Summary of Laboratory Activities for February, 1927

Incidence of Preventable Diseases for February, 1927

STANLEY H. OSBORN, M. D., C. P. H., Commissioner

ISSUED BY
State Department of Health
HARTFORD

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CONNECTICUT

HEALTH BULLETIN

Vol. 41 March, 1927 No. 3

Issued Monthly by the

STATE DEPARTMENT OF HEALTH

MORTALITY IN CONNECTICUT 1922-1926

By William C. Welling

AVERAGE RATES FOR THE FIVE YEARS 1922-1926

(All rates per 100,000 population unless otherwise stated)

Diseases	Mean Rate*	Dispersion	Trend	Chance Dispersion	Lexian Ratio	Lexian Ratio, ex Trend
All Causes	11.7± .1	±0.3± .1	−0.1 ± .1	± .1	3.0	2.0
Typhoid Fever	2.5± .2	±0.4± .1	**−0.25± .05**	± .4	1.0	0.4
Measles	7.3±2.0	±4.0±1.3	+0.15±1.3	± .7	5.7	5.7
Scarlet Fever	3.4± .4	± .7± .3	**− .5 ± .07**	± .5	1.4	.4
Whooping Cough	6.6± .7	±1.4± .5	− .11± .5	± .6	2.3	2.3
Diphtheria	10.0±1.4	±2.9±1.0	**−1.95± .3**	± .8	3.6	1.1
Influenza	31.1±3.6	±7.2±2.4	−1.13±2.3	±1.3	5.5	5.5
Pulmonary Tuberculosis	72.9±3.5	±7.0±2.3	**−4.47± .9**	±2.2	3.2	1.2
Other Forms, Tuberculosis	10.4±0.1	± .2± .07	+ .13± .21	± .8	0.25	.75
Pneumonia, All Forms	113.7±4.7	±9.4±3.1	−4.5 ±2.3	±2.8	3.3	2.5
Cancer	104.1±1.6	±3.2±1.1	+1.4 ± .9	±2.6	1.2	1.0
Diarrhoea and Enteritis, Under 2	20.9±2.1	±4.2±1.4	**−2.81± .47**	±1.2	3.5	1.2
Suicide	12.4± .7	±1.3± .4	+ .37± .4	± .9	1.4	1.2
Accident	71.2± .4	± .8± .3	0	±2.1	.4	

*Per 1,000 population. Trends in bold face type are significant.

Deaths from All Causes

The crude death rate, which is the death rate figuring deaths from all causes with reference to thousands of the population, was 11.7 in 1926 and 11.6 in 1925, a slight increase. The mean or average rate over the five years 1922-1926 was 11.7±.1. The table above has various columns, one is the column for the Mean Rate. In this are two sets of figures, the mean rate and the figures with a ± prefix. The latter are called the standard deviation of the mean or the dispersion of the mean. What do they mean? If a great many sets of 5 year intervals were chosen, in which intervals it

would be only fair to assume that essentially identical conditions obtained, then the standard deviation of the mean states that in two-thirds of the number of sets of 5 years the true mean would lie within the limits of the standard deviation. In the example of the average crude death rate of 11.7±.1 if, under similar conditions, say 21 sets of 5 year averages were figured, then in two-thirds of the 21, or 14 cases, the true mean would lie between 11.6 and 11.8; the 11.6 is 11.7 – .1 and 11.8 is 11.7 + .1. This is the interpretation to be put on the standard deviation of the mean in all examples given above.

Standard Deviation and Trend

Every series of values has its standard deviation, which is a measure of the scattering about the mean. For the crude death rate the scattering is ±.3 ±.1 and this is a low value, which means that there is relatively little scattering about the average rate.

It is always of interest, and also of importance, to know whether or not a definite trend is contained within a series of values. In a series of only 5 years all conclusions must be regarded cautiously. The trend of the crude death rate was -0.1±.1 in the interval 1922-1926. Here again we have two values. A negative trend, meaning that it is downward, which is desirable, and also another standard deviation associated with the trend. This standard deviation will give us an index of the reliability of the trend. Unless any value under discussion is at least twice its standard deviation, not great importance should be attached to it. We therefore discover that the trend of the crude death rate is exactly equal to its standard deviation and therefore of no significance from a purely mathematical point of view, for it might just as well have been 0 or –.2 or perhaps it is better stated that the value may vary, positively or negatively, by 100 per cent of itself and certainly any value subject to such a percentage variation cannot be very reliable.

Chance Variation

In the analysis of a series of values, if the chance variation can be discovered such a value is of sufficient importance to be calculated. In the monthly bulletin of August, 1925, it was shown how such a value may be calculated for vital statistics. The chance dispersion of the crude death rate turns out to be ±.1. Therefore, between 1925 and 1926 if there was an increase of .1 or a decrease of .1 it might reasonably be assumed that such variation arose from pure chance. Such actually proved to be the case—there was an increase in rate of .1 and the increase is only what might have been expected.

A certain ratio called the Lexian Ratio is of value. It is found by dividing the **actual** dispersion (standard deviation) of the series by the **chance** dispersion (chance standard deviation). In the series of crude death rates the actual dispersion was .3 and the chance dispersion .1. The Lexian Ratio is therefore 3.0 and means that there are certain internal features inherent in the series which make its dispersion three times what might have been expected to arise from pure chance. A Lexian Ratio of unity (one) means that the series is normal. A ratio of 3.0 is rather high.

It is also possible to calculate what the Lexian Ratio becomes when the trend is excluded. In this case the Lexian Ratio decreases to 2.0 when the trend is excluded. Still rather high; which might have been expected, for it may not be right to exclude the trend since it was discovered not to be significant.

These very brief remarks on certain important statistical constants seemed necessary as a preliminary to the other rates which will be discussed.

Typhoid Fever

The extremely low rate of 1.8 per 100,000 population is the typhoid fever record for 1926, which is incidentally the lowest rate ever recorded in Connecticut. In the past 5 years it has varied from 3.0 to 1.8 with average rate at $2.5\pm.2$. While the rates are low there is some considerable fluctuation about the mean and therefore a fairly large standard deviation is to be expected. It turns up as $\pm0.4\pm.1$.

The trend is $-0.25\pm.05$. Actually the rate is only decreasing by .25 each year but since the .25 is 5 times the standard deviation of .05 this decrease is of great importance. It states emphatically that the rate is decreasing. A trend, by the way, reduces the ups and downs of yearly variation into a straight line.

The chance dispersion is $\pm.4$, giving a Lexian Ratio of 1.0. The Lexian Ratio with the trend excluded gives a value of 0.4.

Measles

Ordinarily measles is thought of as a mild disease, but when an epidemic of the proportions experienced last year sweeps over the state, considerable mortality is inevitable. In 1925, there were 39 deaths from measles and in 1926 there were 194, an increase over 1925 of practically 400 per cent. There were 17,078 cases reported.

The death rate per 100,000 population rose from 2.5 in 1925 to 12.4 in 1926. Over the period 1922-1926 the average rate was 7.3 ± 2.0, with a maximum of 12.4 and a minimum of 2.5. With such fluctuations a large standard deviation

is to be expected and such proves to be the case—the value is 4.0±1.3.

It would be a very safe bet to wager that the trend in such a series will be worthless. Calculating its value yields +.15 ±1.3. The trend, instead of being several times its standard deviation is only one-tenth—and hardly any value could be more worthless. A measure of worthlessness is hard to arrive at.

The chance dispersion is ±.7 giving a very high Lexian Ratio of 5.7 and of course the Lexian Ratio remains high, again 5.7, when the worthless trend is excluded.

Scarlet Fever

Scarlet fever is going down nicely. The rate in 1926 of 2.2 per 100,000 population is the lowest in the last five years. The average rate has been 3.4±.4 with a standard deviation of ±.7±.3. A large standard deviation may be looked upon in two ways—if the trend is downward why should not a large standard deviation be desirable? And if the trend is upward it would be undesirable. In this case the value of ±.7 seems rather large, but as the trend is downward and of great significance, as will appear, the standard deviation is not so bad after all. The trend is –.5±.07 and is of great value. The chance dispersion is ±.5 giving a Lexian Ratio of 1.4 which sinks to .4 when the trend is excluded.

Whooping Cough

The death rate from whooping cough decreased in 1926 with reference to 1925. The five year average rate was 6.6 ±.7 with a standard deviation of ±1.4±.5. The trend is –.11±.5 and of no statistical value. The chance dispersion is ±.6, Lexian Ratio 2.3, excluding trend 2.3. On the whole an erratic series.

Diphtheria

Great strides are being made in reducing diphtheria. In 1925 the rate was 8.2 and in 1926 the rate was 5.3. This rate of 5.3 is the lowest ever recorded for the disease. It can be made much lower with universal use of toxin-antitoxin.

The average rate for five years is 10.0±1.4 and the fact that last year the rate was 5.3 will show that the descent is somewhat precipitous. A relatively large standard deviation is to be expected and it proves to be 2.9±1.0. The trend is –1.95±.3, an extremely favorable value. The chance dispersion is ±.8 and the Lexian Ratio is 3.6. Excluding the trend reduces this ratio to 1.1.

Illustrative of the results being attained, in the review of mortality which was published in the March Bulletin, 1926, the trend was –.96±.3 over the years 1921-1925. This has now become –1.95±.3.

Influenza

During 1926, there was an increase in influenza which was nation wide. In Connecticut the rate for 1925 was 26.6 ± 1.3 and in 1926 it was 35.9 ± 1.8. This is an increase in rate of 9.3 ± 2.2 and as the increase is more than 4 times its standard deviation the recurrence of influenza may be safely assumed to have been no chance reappearance.

Influenza is one of the erratic diseases. The average death rate for the past 5 years has been 31.1 ± 3.6 with standard deviation $\pm 7.2 \pm 2.4$. There has been a downward trend of -1.13 ± 2.3 which, from the large value of the standard deviation as compared with the trend itself, is of no trustworthiness. The chance dispersion is ± 1.3 and both Lexian Ratios are very high, being equal to 5.5.

Pulmonary Tuberculosis

The death rate from pulmonary tuberculosis rose a trifle in 1926 over 1925, but not alarmingly. In the figures which are being briefly analyzed in this review, the trend is greater in this disease than in any other discussed, that is it is the greatest significant trend. The numerical value is $-4.47 \pm .9$. The mean rate is 72.9 ± 3.5, the dispersion is $\pm 7.0 \pm 2.3$, a large value, but only 10 per cent of rate whereas in the case of influenza the standard deviation was some 24 per cent of the rate. The chance dispersion is ± 2.2, with a Lexian Ratio of 3.2. When the trend is excluded the series becomes practically normal, the Lexian Ratio decreasing to 1.2.

Other Forms of Tuberculosis

A very unsatisfactory series. No conclusion can be drawn. The mean, however, is apparently very stable. The trend is negligible and the Lexian Ratios show that the series is subnormal both including or excluding the trend.

The Pneumonias

The rate for pneumonia, all forms, decreased very slightly in 1926. And in the past 5 years has shown considerable variation about the mean of 113.7 ± 4.7. With such fluctuation a comparatively large standard deviation is to be expected. It proves to be $\pm 9.4 \pm 3.1$. The trend is downward, numerically expressed by -4.5 ± 2.3. This might be stretched into significance were it not for the character of the disease and the Lexian Ratios which are 3.3 and 2.5. The exclusion of the trend leaves so much of the Lexian Ratio that it is doubtful if the trend is of value.

Cancer

Cancer decreased somewhat, but an examination of the rates will show relatively little scatter about the mean. The mean for the past 5 years, was 104.1 ± 1.6; scatter $\pm 3.2 \pm 1.1$. The trend is upward, and of value $+1.4 \pm .9$. There is a possibility that this trend is not significant. With widespread knowledge concerning the early treatment of cancer, it seems certain that the upward trend may be eliminated and possibly this doubtful trend is an index of a turning point. It is certain, however, that if the trend be eliminated then the Lexian Ratio is reduced to unity and the series, for the past 5 years, is a normal one.

Diarrhoea and Enteritis, Under 2

In each year since 1922 there has been a steady reduction in the death rate for infantile diarrhoea and enteritis. In all, comparing 1922 with 1926, the reduction is very nearly 13 points.

The average rate over the period has been 20.9 ± 2.1 with an associated serial standard deviation of $\pm 4.2 \pm 1.4$. The trend, however, is the outstanding value, being downward with intensity $-2.81 \pm .47$.

The rates for diarrhoea under 2 are based on the entire population, which is estimated by the usual arithmetic method referred to in the censuses of 1920 and 1910. This estimate does not correct for a lower birth rate. However, with the decreasing birth rate it is inevitable that there should be fewer children under 2 years of age and the reduction in this disease may not be as effective as the lower rates would indicate.

Suicides

During 1926, there were more suicides than in any of the preceding 5 years. The average rate is $12.4 \pm .7$, a standard deviation of $\pm 1.3 \pm .4$ and fortunately an insignificant upward trend of $+.37 \pm .4$. The Lexian Ratios are not very high.

Accidents

The rate for accidental deaths decreased somewhat in 1926 and was the lowest in the past 5 years. The average rate is $71.2 \pm .4$ which average is characterized by the low standard deviation of $\pm .4$ indicating, of course, that there is relatively little departure from the mean. This is perhaps what might be expected. In the absence of any great calamity accidental deaths are not epidemic.

The death rates prove to be absolutely trendless, which means that if the past five years be plotted on a chart the trend line will be horizontal.

FOUR DISEASES, PAST AND PRESENT

Disease	Rates		Lives saved in lessened deaths, 1926
	1885	1926	
Diphtheria	73.0	5.3	1,055
Typhoid Fever	33.2	1.8	489
Tuberculosis, All Forms	244.0	78.0	2,588
Scarlet Fever	41.8	2.2	617
			4,749

If the rates of 1885 had held in 1926 there would have been 4,749 more deaths. Tuberculosis and typhoid fever generally strike at the most productive age of the victim when the average value of such a life would certainly be $5,000. For diphtheria and scarlet fever the unit valuation of life may be taken at, say, $1,000. On this basis the monetary savings amount to $17,057,000. It is much wiser to prevent than to cure and prevention pays dividends.

Deaths and Death Rates

In Connecticut 1922—1926

On Next Page

DEATHS AND DEATH RATES IN CONNECTICUT, 1922—1926 AS OF JANUARY 31, 1926

All Rates per 100,000 Population Unless Otherwise Stated

Year		Total deaths	Death rate, per 1,000 population	Deaths under 1	Infant Mortality Rate*	Typhoid fever	Measles	Scarlet fever	Whooping cough	Diphtheria	Influenza	Tuberculosis pulmonary	Tuberculosis other forms	Pneumonia all forms	Cancer	Poliomyelitis	Cerebrospinal meningitis	Diarrhoea & Enteritis (under 2)	Puerperal state	Suicide	Accident
1922	Deaths	17,437	12.0	2,410	77.0	43	109	62	83	186	518	1,202	140	1,764	1,510	16	45	416	176	170	1,025
	Rates					3.0	7.5	4.3	5.7	12.8	35.8	83.0	9.7	121.8	104.3	1.1	3.1	28.7	5.3*	11.7	70.8
1923	Deaths	17,733	12.0	2,350	76.3	38	160	53	133	187	562	1,166	152	1,878	1,449	10	45	314	183	196	1,057
	Rate					2.6	10.8	3.6	9.0	12.7	38.1	79.0	10.3	127.3	98.2	0.7	3.1	21.3	5.9*	13.3	71.6
1924	Deaths	16,991	11.3	2,176	68.5	38	47	58	78	168	289	1,049	176	1,529	1,565	23	23	298	182	155	1,062
	Rate					2.5	3.1	3.9	5.2	11.2	19.2	69.8	11.7	101.8	104.1	1.5	1.5	19.8	5.7*	10.3	70.6
1925	Deaths	17,686	11.6	2,180	73.2	39	39	45	112	126	407	997	156	1,672	1,646	19	12	284	149	192	1,111
	Rate					2.5	2.5	2.9	7.3	8.2	26.6	65.1	10.2	109.3	107.6	1.2	0.8	18.6	4.9*	12.6	72.6
†1926	Deaths	18,301	11.7	2,096	72.5	29	194	34	94	83	560	1,054	163	1,689	1,656	6	10	249	186	216	1,096
	Rate					1.8	12.4	2.2	6.0	5.3	35.9	67.6	10.4	108.3	106.2	0.4	0.6	16.0	6.4*	13.9	70.3

*Per 1,000 Living births

†Figures for 1926 provisional

	Population of Connecticut	Births
1922	1,447,838	31,314
1923	1,475,122	30,812
1924	1,502,405	31,782
1925	1,529,688	29,801
1926	1,558,996	28,879

THE KAHN TEST IN THE DIAGNOSIS OF SYPHILIS

By Daniel E. Shea

Previous to twenty years ago the diagnosis of syphilis was made entirely on the basis of clinical evidence or history of infection. Little did the physician of that day realize that within a few years the laboratory would become indispensable to the diagnosis of the disease.

In the year of 1905, Schaudinn, the famous zoologist announced the discovery of the spirochete or treponema pallidum, the organism responsible for syphilis. Immediately bacteriologists became interested. Some confirmed Schaudinn's findings and developed numerous laboratory investigations of syphilis. During the same period the early studies of immunologists were being worked out and Metchnikoff with Roux at the Pasteur Institute in Paris established the fact that higher apes could be inoculated with syphilis. From the same Pasteur Institute was also announced the complement fixation phenomenon in immunity by Bordet and Gongou. It was while working on this complement fixation theory in syphilis that Wassermann, Neisser and Bruk developed the laboratory procedure known as the Wassermann test.

Use of the Wassermann Test

The Wassermann test was one of the great medical discoveries of the period and from that time on physicians were not only to have an additional criterion in the diagnosis of syphilis, but also were to some extent to be able to check on anti-syphilitic treatment.

This indeed was a novelty. For, can you imagine the physician for the first time being able to send a small amount of blood to the laboratory and receive a report which would indicate whether or not a patient had syphilis? Consequently there developed among the physicians a tendency to depend almost entirely upon the laboratory results, often beyond scientific justification, and at the same time to disregard their clinical findings. Occasionally these misinterpretations of the test were serious, and many cases of syphilis were diagnosed when the disease was not present and more often a patient was liable to receive a clean bill of health where in reality a syphilitic infection was harbored within him. Today the well informed physician regards the blood findings merely as one of the diagnostic signs and correlates with it the many other physical findings found in the patient before coming to a definite diagnosis.

Not realizing that within the first few days of the initial lesion of syphilis the Wassermann test was negative, also that in the latent stage of the disease it might also be negative,

there were many who would criticise the value of the Wassermann reaction. But the greatest criticism toward this test was the complexity of its performance.

To understand, we must realize that the test employs five different reagents, each of which is derived from some animal. Specifically, we go to the cow for antigen, to the rabbit for amboceptor; to the guinea pig for complement; to the sheep for red corpuscles and to man for the serum. Each of these reagents, furthermore, must be carefully standardized not only individually but in relation to the other reagents as well. When reading the results of a Wassermann test, we are actually reading whether or not sheep corpuscles are dissolved. From this we conclude whether guinea pig complement is combined or free, and from this whether there are syphilitic reacting substances in the serum to be tested and finally if the presence of syphilis is indicated in the patient.*

Search for a Simpler Test

As far back as 1907, one year after the discovery of the Wassermann test, investigators began to work on a less complex test and one which would do away with the use of animals. Michealis was the first worker to publish studies in this field. He observed that when serum from a syphilitic patient was mixed with an especially prepared antigen and the mixture incubated over night, a precipitate resulted from that mixture. This work, although being of highly scientific value, was soon proved to be of little practical importance.

Later, in the year of 1917, there was developed in Germany two other precipitation tests, one being proposed by Meinecke and the other by Sachs and Georgi. The most that was expected from either of these tests was that they would serve as a check against the Wassermann test, and at no time were they thought of as a replacement for the original Wassermann. Several other precipitation tests have been proposed since that time none of which have been generally accepted.

The Kahn Test

In the year of 1921, R. L. Kahn of the Michigan Department of Health first became interested in discovering what was wrong with these various precipitation tests. This led him to make a study of the principles which govern the phenomona of precipitation in syphilis. The result of these studies is what is now known as the Kahn precipitation test for syphilis. Like the originators of the other precipitation tests, the first recommendation made by Kahn was that it should act as a check against the Wassermann; but after a series of 15,000 tests had been made in the Michigan State Department of

*Details of this test described in Conn. Health Bulletin, 1924, Vol. 38, No. 4.

Health Laboratories, it was thought that the Kahn test was superior in diagnostic value to the Wassermann.

After correlating the results of 160,000 comparative Kahn and Wassermann tests over a period of three years, it was recommended that the State of Michigan abandon the Wassermann test as a routine procedure, and accept the Kahn test for the laboratory diagnosis of syphilis. This recommendation was accepted and became effective October 12, 1925.

Since that time the United States Navy has also abandoned the Wassermann in preference for the Kahn test, and many of the State Departments of Health have experimented with this test using it comparatively with the complement fixation test.

In March, 1925, the Bureau of Laboratories of the Connecticut State Department of Health began to experiment with the new test in a small way. Lack of time and personnel have prevented making a thorough study of the test and for that reason the laboratories are not as yet in a position to make a definite statement regarding the adoption of this test.

On November 26, 1926, 2,180 Kahn tests had been made in our laboratories. Of these 1,123 were positive, 376 were negative and 681 gave a doubtful or partial reaction. Up to the end of January, 1927, 4,212 Kahn tests were made; of these 2,347 were strongly positive, 692 negative and 1,172 gave weakly positive reactions.

The relatively few negative tests and the high proportion of partial reactions require explanation. As far as possible all positive and partially positive complement fixation tests have been checked by the Kahn technique. Specimens giving negative Wassermann tests have been examined by the Kahn test only when the physician specifically requested this test to be made. For these reasons attention is called to these facts, as otherwise the high percentage of positive and partially positive reactions would be misleading.

Points in Favor of the Kahn Test

The simplicity of the Kahn test is probably the greatest argument in its favor. Naturally the more complex a test is, the greatest are its sources of error. This is particularly true with regard to tests which depend upon reagents coming from animal sources, such reagents usually being unstable and difficult to standardize. This point is readily recognized by the fact that in the past fifteen years many attempts have been made to standardize the Wassermann test, and as yet no one has fully succeeded. There are probably as many different techinques used for the Wassermann test as there are laboratories doing the test. Another point in favor of the Kahn test, is the ease with which the findings are read. Antigen is mixed with syphilitic serum and a visible precipitate occurs in the mixture; antigen is mixed with non-syphilitic serum and the

mixture remains clear with no precipitate occurring. Consequently the technician is not confused in the reading of the results.

Time also is of considerable importance especially in emergency cases where a rapid report is necessary, such as examining the blood of a donor for blood transfusions. In the Kahn test it takes about 45 minutes to prepare the patient's serum for the test (15 minutes to separate the serum from the clot by centrifugation and 30 minutes for heating the serum; when the serum is ready, the actual performance of the test is a matter of from five to ten minutes. The time saved by the adoption of this test has resulted in the Michigan state laboratory being able to mail a report to the physician in from 4 to 24 hours after receiving the specimen.

From an economic standpoint the Kahn test, if finally adopted as superior or comparable with the Wassermann, will make it available for use in all parts of the world as well as in the smallest communities having laboratory facilities in our own country. The complicated technique of the Wassermann prohibits its use in the smaller hospitals. Most of the hospitals are not equipped for the performance of the test and those that are generally carry out the procedure but once a week. The Kahn test requires neither animals, nor expensive apparatus, nor large personnel, the only reagent required being the antigen which is an unusually stable product and which can be prepared and standardized in a central laboratory and distributed anywhere.

The United States Navy prepares its antigen at the Navy Medical School in Washington and ships it to the naval stations throughout the world for utilization.

If the Kahn test is eventually adopted, it is believed that laboratory diagnosis will play a greater part in the control of syphilis than ever before and that many cases of infectious syphilis, which heretofore were delayed by a waiting period of several days for a report from the laboratory will be brought under treatment earlier. For this reason alone public health officials are extremely interested in the outcome of the Kahn test, and the Connecticut State Department of Health is carrying on its investigation.

Because of the large number of requests for the Kahn test that are being received from physicians of the state and the shortage of personnel, the laboratory is able to perform the test on only selected specimens that show a negative Wassermann. These specimens are selected according to information furnished by the physician on mailing the specimen. However, all positive Wassermann samples will receive a Kahn test as a check.

CARRIERS EXCLUDED FROM HANDLING OYSTERS

By Millard Knowlton

The Connecticut State Sanitary Code requires that specimens of feces and urine from oyster shuckers and packers be found negative for typhoid and the paratyphoids before cards are issued permitting them to handle oysters. This procedure was begun in 1925 and the following table gives the number of such cards issued for each of the two years 1925 and 1926.

City or Town	Estimated Population as of July 1, 1926	1925	1926
Clinton	1,225	....	2
Groton	11,045	....	6
Guilford	2,723	4	8
Hartford	164,228	....	2
Madison	2,072	5	6
New Haven	181,823	129	102
New London	29,566	....	1
Norwalk	29,859	160	123
Westport	5,685	....	1
Total		298	251

In making laboratory examinations before issuing the permits listed in the foregoing table, five paratyphoid carriers were discovered in 1925 and one typhoid carrier was discovered in 1926. All five of the paratyphoid carriers discovered in 1925 were in Norwalk. Four of them were carriers of paratyphoid B and one paratyphoid A. The typhoid carrier discovered in 1926 was in New Haven.

Usually one examination was made per year of these oyster handlers though in a few instances where the first specimen was unsatisfactory for some reason additional examinations were made. It may be noted also that most of the persons examined in 1926 had been previously examined in 1925 and found negative at that time.

The laboratory of the New Haven Health Department has examined specimens from New Haven, while specimens from elsewhere have been examined in the State Department of Health laboratory. Altogether this involved the examination of more than six hundred specimens in the state laboratory during the two-year period.

This report is made for the purpose of making available data bearing upon the value of laboratory examinations in determining fitness to handle oysters. The percentage of carriers found by such examinations may be expected to vary with the typhoid rate during recent years. The rate for Connecticut has been relatively low.

Thus the 5 carriers found in 1925 would be about 1.6 per

cent of the 303 persons from whom specimens were examined. Combining figures for the two years, and considering the examinations in 1926 as second examinations of persons previously examined in 1925, the net result would be 6 carriers among a little over three hundred persons examined on an average of slightly less than two times each. This would give a percentage just under two.

For comparison a recent study by the Alabama State Board of Health may be cited, in which an average of 2.3 examinations per person disclosed 55 typhoid and paratyphoid carriers among 1076 milk handlers, or a rate of 5.1 per cent. Omitting 31 carriers found among 300 persons examined in a community where the typhoid rate had formerly been very high leaves 24 carriers among 776 persons, a rate of 3.1 per cent.

VACATION AND TYPHOID

NOW IS THE TIME TO

PROTECT YOURSELF AGAINST TYPHOID FEVER

TYPHOID VACCINE PROTECTS YOU

INJECTIONS OF PREVENTION ARE BETTER

THAN A POUND OF CURE

TYPHOID IS ONE OF THE PREVENTABLE DISEASES

NEWS NOTES FROM THE FIELD

Physicians Licensed

During the month of February the following physicians have been licensed by the State Department of Health:

Waterbury, Conn., Dwyer, Christopher E., 14 Pine Street.

Lawrence, Mass., Scarito, Nicholas J., 95 Summer Street.

Health Officers Appointed

Windham County Health officer, William A. King has appointed Erel L. Guidone, M. D., health officer of Hampton succeeding Dr. A. D. Marsh.

Middlesex County Health officer, M. Eugene Culver has announced the appointment of John D. Milburn, M. D., to act as health officer of East Hampton during the illness of Dr. F. T. Fitch.

Litchfield County Health officer, William W. Bierce has appointed Jerome S. Chaffee, M. D., as acting health officer of Sharon during the illness of Dr. C. W. Bassett.

New London County Health officer Hibberd R. Norman has announced the appointment of D. E. G. Taylor, M. D., as health officer of Stonington succeeding the late Dr. Congdon.

County Public Health Meetings

On March 3 the New Haven County Public Health Association met at Hotel Garde, New Haven. The chief discussion of the day led by Warren J. Scott of the State Department of Health centered on the water sheds in the County, their care, amount of storage for use in dry spells, filtration and chlorination, and other allied subjects.

Also on the same date was held the New London County Public Health Association at Hotel Wauregan, Norwich. At this meeting Dr. Millard Knowlton of The State Department of Health discussed the role of the typhoid carrier in present typhoid problems, emphasizing the methods of investigation to determine the source of infection.

Board Members' Institute

An Institute for Board members of Public Health Nursing Associations has been planned for April 4—7. This is to be held at New Haven, is sponsored by the New Haven Visiting Nurse Association in affiliation with the National Organization for Public Health Nursing, and members from the eastern states from Massachusetts to Virginia and Maine to Indiana are invited to attend.

A comprehensive program has been announced, including discussions by well known national and local health leaders.

THE ALLOCATION OF DEATHS

The figures which will appear in this bulletin, and hereafter, for the vital statistics of the state have been allocated as to residence at time of death, in the analysis of death certificates and allocated according to the residence of the mother in the discussion of birth records.

The rules relating to the allocation of the death records are as follows:

Definition of Non-Resident

A Non-Resident Death is that of a person who dies away from his usual place of abode within one year if the duration of the disease (stated or inferred) was as great or greater than the length of residence in the district where death occurred.

Application and Exceptions

1. Chronic Diseases. In the case of a death from tuberculosis or any nervous disorder, although the length of residence exceeds one year, if the duration of the disease is longer the death shall be considered as non-resident; and if the duration is not given, all deaths from chronic causes shall be considered non-resident if they occur within six months after arrival at place of death.

2. Communicable Diseases. Deaths from communicable diseases, particularly typhoid, tuberculosis, and less common diseases when in epidemic form, shall be charged to the place where the disease was contracted, if definitely known as being elsewhere than the place where death occurred.

3. External Causes. A death due to violence or accidental cause shall be charged to the usual place of abode if known, unless it definitely resulted from a hazard peculiar to the place of occurrence. Deaths caused by drowning, conflagration, street car, automobile, or railroad accidents, or industrial accidents in the course of employment, are the type which shall be charged to the place of occurrence. Homicidal and suicidal deaths shall be charged to the place of occurrence.

4. Deaths in State Institutions (Correctional, Educational, and Medical). These shall be charged to the place of residence at the time of admission, unless some other district is stated or may be inferred to have been the district of origin of the fatal illness.

Rules

(1) Deaths from external causes shall be charged to one of the following places, to be preferred in the order stated:

(a) District of occurrence; if unknown then to
(b) District of death; if unknown then to
(c) District where body was found.

(2) Deaths of inmates of custodial institutions (for the feebleminded, juvenile delinquents, etc.,) shall be treated the same as those occurring in prisons and insane asylums (see application 4 above). Deaths of inmates of orphan asylums and homes for the aged shall be treated as deaths of residents unless transferable under the general definition and its exceptions.

(3) Deaths of new born infants and young children shall be charged to the district of usual residence of the mothers.

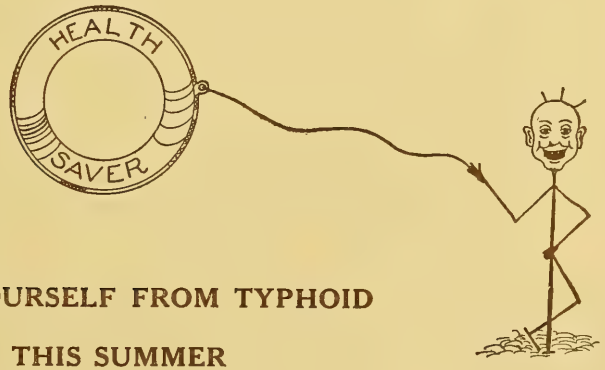
(4) If the data upon which judgment must be based, such as residence or duration of disease, are missing or inconsistent, then charge to district of death; but if other data make possible an inference with reasonable certainty as to the district of residence when the cause of death originated, then the death should be charged to that district.

(5) When two or more causes of death are given jointly, the International List of Joint Causes shall be used as a guide to preference of cause for allocation of the death.

(6) If the district in which the cause of death originated is stated, the death shall be charged to such district unless this statement is inconsistent with other data on the certificate, then the procedure in rule (4) above shall be followed.

(7) All puerperal deaths except puerperal septicemia will be charged to place of usual abode.

(8) Births will be allocated by residence of mother.



SAVE YOURSELF FROM TYPHOID

THIS SUMMER

YOUR FAMILY WILL THANK YOU

See Page 68

Vital Statistics

MONTH OF JANUARY

TOTALS FOR FIRST MONTH OF THE YEAR, 1927, 1926, 1925

	Births	Birth Rate*	Marriages	Mar. Rate*	Deaths	Death Rate*
1927	2,163	16.4±.1	696	5.3±.05	1,623	12.3±.1
1926	2,568	19.8±.1	776	6.0±.05	1,674	12.9±.1
1925	2,617	20.5±.1	785	6.2±.05	1,687	13.2±.1

*Rate on annual basis, per 1,000 population.

The births are again astonishingly low in number and give a correspondingly low birth rate of 16.4. In 1922 there were some 2,886 births for the month and only 2,163 in 1927. Here is a decrease of 700, in round numbers and if maintained throughout the year would result in 8,400 fewer births. This will immediately give a decrease of over 5 points in birth rate, with population about 1,500,000. Such a fluctuation of rate is so large compared with the chance variation, which is but a trifle over 0.1, that there are evidently some very positive agencies or forces in operation which are very difficult to discover.

The omens are propitious for a favorable year in death records. The number of deaths for 1927 is 51 less than in 1926 and the rate of 12.3 is the lowest to appear in the last five years. The winter months are the months in which savings in mortality must be made if the year is to produce a record. Later in this article a somewhat more detailed analysis will be made setting forth the causes in which reduction was made, 1927 lower than 1926.

The marriages are considerably lower than in 1926 and the marriage rate is the lowest in the last five years.

Births

The records of 2,163 birth certificates were received as compared with 2,568 in 1926, a decrease of 405. What is the chance dispersion of this difference? On the assumption that the births of one year are not correlated to the births of the previous year, the chance variation of the difference 405 is nearly 70. Therefore, the difference is over five times its standard deviation due to chance and it may be concluded (not forgetting the assumption) that the decrease is of intense significance. This brings us no nearer to the explanation. It merely states that chance could not bring about the decrease.

The state considers, statistically, all towns of over 5,000 population in more detail than towns under 5,000. There are

now 49 such towns over 5,000, Plainville having been added since last year. Of these 49 towns 16 reported more births in 1927, for January, than in 1926. In only 4 were the increases more than 10, namely,

Ansonia	22± 7	Stamford	13±13
Fairfield	15± 6	Wallingford	11± 4

Of these increases several are significant. Ansonia, Fairfield and Wallingford show substantial increases. It must be remembered that the births are being allocated for residence of the mother. This has had a very decided effect on Bridgeport, Hartford and New Haven which cities show decreases which, were they not explained by the new procedure of allocation, would be greater than any mere chance variation. Thus, Bridgeport shows a decrease, 1927 compared with 1926, of 71±22; Hartford a decrease of 77±25 and New Haven a decrease of 64±24.

It will therefore appear that to compare 1927 with 1926 for these figures is open to some criticism. Not until 1928, when a comparison of that year with 1927 is possible, will the figures be strictly comparable again.

Stillbirths

In January, 91 stillbirths were reported, which is at the rate of 40.7 per 1,000 total births compared with 94 stillbirths in 1926, a rate of 35.3 per 1,000 total births. Is the increase significant? The chance variation must be discovered. In 1927 the rate is 40.7±4.0; in 1926 it is 35.3±3.0. Therefore the difference in rates is +5.4±5.0, showing no significant increase.

Deaths

Records of 1,623 deaths were received, a decrease of 51 below the 1,674 reported in 1926. This is a splendid start. And we might reduce the 1,623 by 21, the 21 being deaths of residents of other states which occurred in Connecticut. However, these 21 deaths will appear as a separate entry in the table following this review.

The allocation of deaths will have great effect on certain cities and towns. For example, the death rate for Middletown in 1926 was 26.7. In 1927 it is 13.1, the reduction being the result of allocating the deaths occurring in the great state hospital located there.

Similarly, while some towns will benefit under the new adjustment, others may apparently suffer; but the whole scheme of allocation is to do justice, be fair and attempt to arrive at a better and truer index of the actual conditions.

A comparison of the increases and decreases of deaths, 1927 compared with 1926, gives the following table for certain diseases:

Cause of Death	1927	1926	Increase	Decrease
Diseases of the heart	274±17	243±16	31±23	....
Epidemic encephalitis	1± 1	4± 2	....	3± 2
Pneumonia undefined	0	3± 2	....	3± 2
Typhoid fever	2± 1	3± 2	....	1± 2
Measles	2± 1	39± 6	....	37± 6
Scarlet fever	2± 1	4± 2	....	2± 3
Whooping cough	7± 3	14± 4	....	7± 5
Diphtheria	8± 3	17± 4	....	9± 5
Influenza	51± 7	53± 7	....	2±10
Tuberculosis pulmonary	91±10	68± 8	23±13	....
Tuberculosis other forms	9± 3	14± 4	....	5± 5
Cancer	156±12	123±11	33±17	....
Cerebrospinal meningitis	0	1± 1	....	1± 1
Poliomyelitis	1± 1	0	1± 1	....
Pneumonia lobar	109±10	129±11	....	20±15
Pneumonia broncho	63± 8	91±10	....	28±12
Diarrhoea & Enteritis (Under 2)	16± 4	16± 4	....	....
Puerperal diseases	17± 4	16± 1	1± 6	....
Accident	80± 9	105±10	....	25±14
Suicide	12± 3	21± 5	....	9± 6
Homicide	4± 2	1± 1	3± 2	....
Other causes	718±27	709±27	9±38	....
Totals	1,623±40	1,674±41	101	152

Two of the increases appear to be of significant value. There was an increase in pulmonary tuberculosis which should be viewed with suspicion. It is larger than to be expected. Similarly for cancer the increase is not accountable as a chance phenomenon.

There are three decreases which are worthy of note. There was a great decrease in measles deaths, which might have been expected to follow such an unfavorable month as January 1926. Measles will probably be negligible (statistically) during 1927, for so it goes in many such instances, a high rate one year, very low the next year.

The decrease for broncho pneumonia is significant. If the state has a favorable pneumonia year a low general death rate may be confidently expected, and 1927 is apparently off to a good start.

Deaths due to accidents decreased in a significant amount. Owing to the heavy snows of the month, it might be suspected that deaths due to automobile accidents would decrease, and such proves to be the case. There were 20 such deaths in 1927, compared with 27 in 1926.

The infant mortality is especially low for January, being 10 points lower than the previous low in the past six years. The rate is 69.8. The highest rate since 1922 occurred in 1925 and was 93.9.

FOR SIX YEARS—JANUARY, 1927

CONNECTICUT	1922	1923	1924	1925	1926	1927
BIRTHS *Birth Rate*	2386 23.9	2590 21.1	2689 21.5	2617 20.5	2568 19.8	2163 16.4
DEATHS *Death Rate*	1595 13.2	1833 14.9	1556 12.4	1687 13.2	1674 12.9	1623 12.3
MARRIAGES *Marriage Rate*	767 6.4	777 6.3	820 6.5	785 6.2	776 6.0	696 5.3
COMMUNICABLE DIS.* DEATHS *Per Cent to Total Deaths*	202 12.7	257 14.0	159 10.2	182 10.9	199 11.9	164 10.1
DEATHS UNDER 1 YEAR *Rate Per 1,000 Births*	210 79.4	238 92.7	220 83.1	233 93.9	196 81.4	166 69.8

*Includes Typhoid Fever, Measles, Scarlet Fever, Whooping Cough, Diphtheria, Tuberculosis Pulmonary, Cerebrospinal Meningitis, Poliomyelitis, Influenza.

DIPHTHERIA WILL DISAPPEAR FROM CONNECTICUT

WHEN EVERY CHILD IS IMMUNIZED

WITH TOXIN ANTITOXIN

HELP THIS CAMPAIGN IN YOUR TOWN

Statistics
January, 1927

	Population Est. as of July 1, 1927 Based on U. S. Census	TOTALS				DEATH RATES			AGE GROUPS		
		Births	Stillbirths	Marriages	Deaths	All Causes (per 1,000 population)	Tuberculosis (per 1,000 population)	Children under 1 year (per 1,000 births)	Under 1 year	1 to 5 years	65 years and over
State of Connecticut	**1,586,435**	**2163**	**91**	**696**	**1623**	**12.3**	**0.7**	**69.8**	**166**	**53**	**644**
Ansonia	19,548	34	.....	5	20	12.3	2.5	83.3	2	1	5
Branford	7,073	9	1	3	6	10.2	.....	.....	.....	1	2
Bridgeport	174,890	199	6	62	151	10.4	1.1	43.1	11	3	62
Bristol	26,087	57	.....	18	27	12.4	0.5	80.8	4	.....	13
Danbury	21,931	38	2	12	24	13.1	.....	91.3	4	1	8
Derby	12,963	24	1	6	7	6.5	.....	28.3	1	.....	1
East Hartford	14,311	21	2	3	9	7.5	.....	81.1	1	.....	3
Enfield	13,241	14	1	17	11	9.9	.....	85.1	2	1	4
Fairfield	15,541	23	1	4	11	8.5	.....	200.0	3	.....	3
Glastonbury	6,206	7	.....	.....	2	3.9	1.9	.....	.....	.....	.....
Greenwich	26,373	28	1	40	20	9.1	.....	78.8	3	1	7
Groton	11,326	9	.....	2	13	13.8	.....	110.1	1	.....	7
Hamden	10,718	23	.....	5	21	23.5	1.1	142.8	2	2	6
Hartford	168,258	261	16	101	153	10.9	0.4	63.7	21	6	49
Killingly	9,384	19	1	5	7	8.9	.....	76.9	1	.....	5
Manchester	21,992	20	3	6	9	4.9	.....	26.5	1	1	3
Meriden	36,807	45	4	28	43	14.0	1.3	47.7	3	.....	26
Middletown	22,932	35	.....	11	25	13.1	0.5	144.3	7	.....	8
Milford	14,673	7	.....	2	9	7.4	.....	.....	.....	.....	4
Naugatuck	16,829	19	.....	2	16	11.4	.....	274.8	3	.....	5
New Britain	71,068	119	4	27	59	9.9	0.7	72.3	10	6	11
New Haven	184,727	243	10	86	193	12.5	0.3	50.2	16	4	77
New London	30,149	31	3	15	25	9.9	0.4	64.5	4	.....	15
Norwalk	30,173	42	2	18	45	17.9	0.8	37.2	2	1	20
Norwich	30,689	55	1	14	38	14.9	0.4	.....	.....	4	18
Plainfield	8,818	15	2	6	5	6.8	.....	.....	.....	.....	1
Plainville	5,064	9	.....	1	6	14.2	.....	.....	.....	1	3
Plymouth	6,459	9	1	5	4	7.4	.....	.....	.....	.....	1
Putnam	9,220	8	.....	5	9	11.7	.....	.....	.....	.....	5
Seymour	8,321	8	.....	2	4	5.8	.....	120.0	1	.....	1
Shelton	11,699	10	.....	.....	12	12.3	.....	.....	.....	.....	6
Southington	9,925	17	.....	2	22	26.6	.....	148.1	2	3	8
Stafford	5,472	8	.....	3	4	8.8	2.2	.....	.....	.....	.....
Stamford	48,515	91	5	34	48	11.9	0.2	64.0	6	1	13
Stonington	11,041	12	1	5	15	16.3	1.1	75.9	1	.....	9
Stratford	17,451	16	1	1	15	10.3	0.7	172.2	3	.....	6
Thompson	5,226	7	.....	6	8	18.4	.....	275.8	2	.....	4
Torrington	25,316	33	.....	6	14	6.6	0.5	24.5	1	1	7
Vernon	8,751	7	.....	.....	6	8.2	.....	.....	.....	.....	4
Wallingford	12,659	15	.....	2	12	11.4	0.9	.....	.....	.....	8
Waterbury	105,960	138	6	40	103	11.7	1.4	75.9	14	2	21
Watertown	7,506	13	1	3	3	4.8	1.6	.....	.....	.....	1
West Hartford	11,908	17	1	2	22	22.1	1.0	406.8	6	.....	9
West Haven	18,834	30	1	9	34	21.6	5.1	31.5	1	2	9
Westport	5,772	9	.....	2	7	14.6	2.1	203.3	1	.....	1
Wethersfield	5,264	6	.....	2	9	20.5	.....	307.7	1	.....	4
Winchester	9,109	11	2	1	15	19.8	.....	66.7	1	2	7
Windham	14,418	20	.....	6	26	21.6	.....	186.3	5	1	12
Windsor	6,732	7	.....	2	6	10.7	1.8	.....	.....	.....	3
Towns under 5,000	209,106	240	11	59	249	14.3	0.7	66.9	17	8	134
Other States	.....	25	.....	.....	21	.....	.....	.....	2	.....	5

DEATHS FROM IMPORTANT CAUSES

Diseases of the Heart	Encephalitis Epidemic	Pneumonia Undefined	Typhoid Fever	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Influenza	Tuberculosis-Pulmonary	Tuberculosis Other forms	Cancer	Meningitis-Cerebrospinal	Poliomyelitis	Pneumonia—Lobar	Pneumonia—Broncho	Diarrhoea-Enteritis Under 2	Puerperal Diseases	Accident	Suicide	Homicide	Institutional Deaths	Non-resident Deaths
274	1	.....	2	2	2	7	8	51	91	9	156	.....	1	109	63	16	17	80	12	4	567	.....
5	.....	.....	.....	.....	.....	.....	.....	1	4	.....	2	.....	.....	.....	1	.....	.....	1	.....	.....	4	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	2	.....
25	.....	.....	.....	.....	.....	.....	1	7	16	1	18	.....	.....	9	5	1	.....	5	1	.....	70	.....
4	.....	.....	.....	.....	.....	.....	.....	2	1	.....	4	.....	.....	1	2	.....	.....	1	.....	.....	9	.....
4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	1	.....	.....	.....	4	1	1	5	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	1	.....	5	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	1	.....	.....	.....	2	.....	.....	.....	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	3	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	2	.....
2	.....	.....	.....	.....	1	.....	.....	1	.....	.....	1	.....	.....	2	2	.....	.....	.....	.....	.....	10	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	1	.....	1	1	.....	.....	5	.....
3	.....	.....	.....	.....	.....	.....	.....	3	1	.....	3	.....	.....	3	.....	.....	.....	1	.....	.....	5	.....
29	.....	.....	2	1	.....	.....	1	5	6	1	13	.....	.....	13	8	.....	2	11	.....	1	61	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....	.....	.....	.....	.....	.....	3	.....	.....	1	.....
8	.....	.....	.....	.....	.....	.....	.....	1	4	.....	.....	.....	.....	4	1	.....	.....	1	.....	.....	12	.....
4	.....	.....	.....	.....	.....	.....	.....	1	1	.....	2	.....	.....	2	2	.....	.....	.....	.....	.....	11	.....
3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	.....	.....	.....	.....	.....	1	.....	.....	.....	8	.....
9	1	.....	.....	1	.....	3	1	2	4	1	9	.....	.....	4	.....	1	1	2	.....	.....	23	.....
24	.....	.....	.....	.....	.....	.....	.....	6	5	.....	24	.....	1	21	13	.....	3	7	3	1	75	.....
3	.....	.....	.....	.....	.....	.....	.....	1	1	.....	1	.....	.....	2	1	1	.....	1	.....	.....	10	.....
9	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	3	.....	.....	3	1	1	1	2	1	.....	7	.....
4	.....	.....	.....	.....	.....	.....	2	.....	1	.....	2	.....	.....	5	3	.....	.....	.....	.....	.....	11	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....	2	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....	2	.....
2	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....	.....	.....	.....	.....	.....	2	1	.....	2	.....
6	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....	.....	1	.....	.....	.....	.....	.....	.....	6	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....
10	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	3	.....	.....	1	1	2	1	5	2	1	16	.....
4	.....	.....	.....	.....	.....	.....	.....	2	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
3	.....	.....	.....	.....	.....	.....	1	1	1	.....	2	.....	.....	.....	.....	.....	.....	1	.....	.....	5	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	2	.....	.....	1	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	1	1	3	.....	.....	.....	.....	.....	.....	1	1	.....	4	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....
3	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	6	.....
17	.....	.....	.....	.....	.....	.....	.....	4	12	2	7	.....	.....	7	.....	1	3	5	.....	.....	46	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....
4	.....	.....	.....	.....	.....	.....	.....	.....	1	1	1	.....	.....	.....	1	6	.....	1	.....	.....	14	.....
4	.....	.....	.....	.....	.....	.....	.....	1	8	.....	2	.....	.....	3	2	.....	.....	2	.....	.....	16	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....	1	1	.....	.....	.....	.....	.....	4	.....
2	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1	.....	.....	2	.....
1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	2	.....	.....	1	2	.....	.....	1	.....	.....	7	.....
2	.....	.....	.....	.....	.....	.....	2	1	.....	.....	2	.....	.....	1	1	2	.....	2	.....	.....	7	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1	.....	.....	.....	1	.....	.....	.....	.....
56	.....	.....	.....	.....	1	1	.....	9	13	.....	29	.....	.....	14	10	1	4	7	.....	.....	66	.....
4	.....	.....	.....	.....	.....	.....	.....	.....	1	1	2	.....	.....	1	1	.....	.....	1	.....	.....	10	.....

Laboratories

SUMMARY OF BUREAU ACTIVITIES FOR FEBRUARY, 1927

DIAGNOSTIC

	+	—	?	Unclassified	Total	
Typhoid	1	21	....	....	22	
Paratyphoid A	....	22	....	....	22	
Paratyphoid B	....	22	....	....	22	
Diphtheria	122	1,541	1	....	1,664	
Diphtheria Virulence	10	12	....	....	22	
Vincent's Angina	7	687	....	....	694	
Haemolytic Streptococci	39	653	....	....	692	
Tuberculosis	15	98	....	....	113	
Syphilis	219	1,920	236	....	2,375	
Gonorrhoea	17	84	....	....	101	
Pneumonia	2	2	....	....	4	
Malaria	....	1	....	....	1	
Rabies	....	3	....	....	3	
Special Specimens	1	7	....	61	69	5,804

CHEMICAL AND BACTERIOLOGICAL

Milk samples	239	
Water samples	222	
Ice samples	1	
Sewage samples	63	
Seafood samples	31	
Clinical thermometers	190	746
Total examinations made		6,550

BLOOD TESTING AT NEW HIGH LEVEL

The facilities of the laboratories for making blood tests for syphilis are crowded to the extreme with the present staff of workers, although the additional quarters recently provided give ample room for further expansion. The laboratories are faced with a serious problem to handle the large increase of this work, This month showed an increase of 40 per cent in syphilis examinations over February of last year, and an increase of more than 10 per cent over January of this year, in spite of the fact that February is a very short month. Because of the growth of this work, the laboratories are compelled to limit the number of Kahn tests that can be made until more laboratory workers are available.

Preventable Diseases

INCIDENCE OF DISEASE FOR MONTH OF FEBRUARY, 1927

(As compared with previous years)

A comparison of the daily morbidity reports received during the month of February, 1927, with the corresponding month for the years 1922, 1923, 1924, 1925 and 1926.

DISEASE	Average 1922-1926 for February	Mean 1922-1926 for February	1922	1923	1924	1925	1926	1927
Cerebrospinal Meningitis ..	5	2	12	9	2	2	1	5
Diphtheria	212	202	255	191	229	202	183	128
Encephalitis Epidemic	11	4	11	34	2	4	4	5
Measles	1,160	829	545	1,575	829	259	2,591	408
Poliomyelitis	2	1	4	1	2	1	1	1
Scarlet Fever	502	375	375	362	746	725	331	438
Smallpox	16	65	65	10	7	....	....	....
Typhoid Fever	8	7	7	5	5	13	11	4
Tuberculosis Pulmonary	116	104	140	101	133	104	103	117
Whooping Cough	216	197	112	303	188	197	281	179

A comparison of the morbidity on these diseases for the two preceding months, December and January with the February record is as follows:

	December	January	February
Cerebrospinal Meningitis	2	5	5
Diphtheria	123	140	128
Encephalitis Epidemic	4	4	5
Measles	2,252	145	408
Poliomyelitis	2	2	1
Scarlet Fever	288	430	438
Smallpox	....	....	....
Typhoid Fever	8	12	4
Tuberculosis Pulmonary	89	114	117
Whooping Cough	163	242	179

Cases of Other Reportable Diseases

Chickenpox	438	Septic Sore Throat	14
Conjunctivitis Infectious	1	Trachoma	1
Encephalitis Epidemic	5	Gonorrhoea	88
German Measles	69	Syphilis	82
Influenza	49		
Malaria	1	Total	868
Mumps	120		

Cases of Occupational Diseases

Advanced Pulmonary Tuberculosis	1	Toxic Eczema and Rhinitis ..	1
Eczema Caused by Fulminate	1	Papular Dermatitis both forearms	1
Mercury Poisoning	1		
Toxic Eczema and Conjunctivitis	1	Total	6

Cases of Certain Reportable Diseases

February, 1927

	Population Est. as of July 1, 1927	Typhoid Fever	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Meningitis Cerebrospinal	Poliomyelitis	Pulmonary Tuberculosis	Other Forms Tuberculosis	Pneumonia Lobar	Broncho-Pneumonia	Other Com. Diseases
State Total	1,586,435	4	408	438	179	128	5	1	117	22	165	152	868
NEW HAVEN CO.	475,419	3	10	98	21	40	1		40	12	36	26	285
New Haven	184,727	1	1	20	4	1			24	9	12	9	176
Waterbury	105,960	1	1	11	3	12			7	1	6	8	15
Meriden (city and town)	36,807		4	34	13	4			5	2	9	7	29
Ansonia	19,548			3		1			1		1		3
Orange (inc. West Haven)	18,834		1	3		1			1			1	6
Naugatuck	16,829			1		8							
Wallingford (town and boro)	12,659												
Milford	14,673		1	5	1	7			2		3		9
Derby	12,963						1						2
Hamden	10,718	1	1	11		2					1		18
Branford (town and boro)	7,073			2									4
Seymour	8,321			1		2					1		2
Towns under 5,000	26,307		1	7		2					3	1	21
FAIRFIELD CO.	379,505		35	189	40	45	2		25	1	39	29	239
Bridgeport	174,890		24	88		30	1		18		28	14	38
Stamford (city and town)	48,515		5	28	20	3			1			3	41
Norwalk	30,173		1	15	6	1					7	2	49
Danbury (city and town)	21,921			1		1	1					2	4
Greenwich (town and boro)	26,373		1	18	3	5			3		3	5	39
Stratford	17,451			9		2							
Fairfield	15,541		1	19									17
Shelton	11,699			4									
Westport	5,772		1	2	2	1				1			4
Towns under 5,000	27,160		2	5	9	2			3		1	3	46
HARTFORD CO.	402,344	1	232	87	87	29	1		29	8	51	83	209
Hartford	168,258	1	2	29	14	1	1		12	2	17	33	98
New Britain	71,068		3	13	23	4			4	2	9	11	47
Bristol (city and town)	26,087		178	5	8				6	4	3	8	23
Manchester	21,992		1	1	2	13					2	8	15
Enfield	13,241			1	1	1						1	3
East Hartford	14,311			5	1	5					4	3	3
Southington (town and boro)	9,925		1	1		1			1		3		
West Hartford	11,908		16	8	4	2			1		1	3	5
Windsor	6,732			3	4						2	1	1
Glastonbury	6,206			1					2			2	
Wethersfield	5,264			1	2				1		3	1	2
Plainville	5,064												
Towns under 5,000	42,288		31	19	28	2			2		7	12	12
NEW LONDON CO.	114,930		2	39	13	6			13		8	6	32
Norwich (city and town)	30,689			12		4			3		1	2	7
New London	30,149		2	15	9	1			3		3		13
Stonington (town and boro)	11,041			1		1							
Groton (town and boro)	11,326				3						4	2	10
Towns under 5,000	31,725			11	1				7			2	2
LITCHFIELD CO.	80,900			7	7				2	1	7	1	29
Torrington (town and boro)	25,316												
Winchester (inc. Winsted	9,109												
Plymouth	6,459			2						1			
Watertown	7,506												
Towns under 5,000	32,510			5	7				2		7	1	29
WINDHAM CO.	56,258		128	7	9		1		2		14	4	16
Windham (inc. Willimantic)	14,418			4								1	7
Putnam (city and town)	9,220			2	1						5		2
Plainfield	8,818		101		1				1		1		2
Killingly (inc. Danielson)	5,226			1								1	1
Thompson	9,384						1		1			2	1
Towns under 5,000	9,192		27		7						8		3
MIDDLESEX CO.	49,279		1	6	2	6			3		7	3	56
Middletown (city and town)	22,032								1				6
Middletown State Hospital					2	5			1		7		11
Towns under 5,000	26,347		1	6		1			1			3	39
TOLLAND CO.	27,800			5		2		1	3		3		2
Vernon (inc. Rockville)	8,751			1					3				1
Stafford (town and boro)	5,472			1				1			2		
Towns under 5,000	13,577			3		2					1		1

Library, Hygienic Laboratory,
25th & E. Sts. N.W.,

State of Connecticut Health Bulletin

"For a Clean State and a Healthy People"

Vol. 41 April, 1927 No. 4

This Issue Contains

Uniform and Efficient Inspection of the Dairy Farms, Milk Establishments, Milk and Milk Products

Gunning for Bacteria at the State Capitol

Public Health Nursing Activities

News Notes From the Field

Incidence of Preventable Diseases for March, 1927

Births, Deaths and Marriages for February, 1927

Summary of Laboratory Activities for March, 1927

How Physicians are Located in Connecticut Towns

STANLEY H. OSBORN, M. D., C. P. H., Commissioner

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CONNECTICUT STATE DEPARTMENT OF HEALTH
8 WASHINGTON STREET,
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CONNECTICUT

HEALTH BULLETIN

Vol. 41 April, 1927 No. 4

Issued Monthly by the

STATE DEPARTMENT OF HEALTH

UNIFORM AND EFFICIENT INSPECTION OF DAIRY FARMS, MILK ESTABLISHMENTS MILK AND MILK PRODUCTS

The International Association of Dairy and Milk Inspectors having for its object the development of uniform and efficient inspection of dairy farms, milk establishments, milk and milk products, at its fifteenth annual convention in Philadelphia, October, 1926, adopted the following resolution:

WHEREAS, this Association recognizes milk as the first necessity of life, and that inspection of the sources of production, distribution, and careful chemical and bacteriological examination of milk is necessary in the protection of the public health, therefore, be it

Resolved That the International Association of Dairy and Milk Inspectors urgently recommend to the various State and city departments of health that in the selection of those who are to fill the positions of dairy and milk inspectors, special effort be made to employ only those who are entirely reliable, thoroughly competent, and well qualified to adequately safeguard milk supplies and properly protect the public health; and be it further

Resolved That a copy of this resolution be mailed to each State Department of Health, with the request that it be published in the bulletin of the Department.

GUNNING FOR BACTERIA AT THE STATE CAPITOL*

By Friend Lee Mickle

Many of us who avail ourselves of the privilege of listening-in whenever possible when W T I C is on the air, heard, some few months ago, how one physician in Connecticut carries in his automobile a specially constructed rifle that has served him to kill almost countless numbers of groundhogs or woodchucks as he drives through the rural districts on his daily rounds. Gunning for bacteria at the State Capitol is a somewhat different type of sport than that, but just as absorbing and enjoyable to those of us who are devoting a lifetime to it. The microscope with us takes the place of the rifle, and the game we aim at consists of the smallest animals and plants known to exist—so small that many millions of them can live on the head of a pin or under the edge of your fingernail.

This search for bacteria is one of the chief functions of the Bureau of Laboratories of the Connecticut State Department of Health in safeguarding the lives of the citizens of this State. It is a service maintained at the expense of the State so that it is available to each man, woman, or child in the State without cost whenever the need for it occurs, and with only one restriction: You must apply for and receive the benefits of the work of the State Laboratories through your own physician or local health official.

It is my privilege to tell the citizens of Connecticut this morning a little about this service our State maintains to help you get well when you are sick and, far more important, to keep you from getting sick. This great work goes on each week day, each Sunday and each holiday, and our workers have the satisfaction of knowing that their daily labors assist each year in saving the lives of many useful citizens and many children and babies.

The State Department of Health is now nearly fifty years old but I might say that the laboratory, the offspring of the Department, has not yet reached its majority, it is not old enough to vote. The laboratory will not be 21 years old until next year for it was established in 1906. In those first years of its existence it was a mere child compared to the large, efficient organization it is today. The present bureau of laboratories is in great measure the outgrowth of the vision of the late Professor Herbert W. Conn of Wesleyan University, the first director of the laboratories, and a small group of physicians and others who then saw that the laboratories were bound to become a vital factor in the promotion of public

*Radio talk broadcast over W T I C.

health work in Connecticut. Young in years as these laboratories are, they are among the pioneer state and city health laboratories of this country, for the first service of this sort ever instituted was established in New York City in 1893, only 13 years earlier. Today, however, every large State and every large city has a laboratory of this type.

The Connecticut Laboratories were located for about ten years in the buildings of Wesleyan University and for nearly another ten years on state property in New Haven. Nearly two years ago they were moved to much larger and more adequate quarters in a building near the State Capitol where there is much better opportunity for cooperation with other State departments. The work the laboratories have been called upon to do has doubled since they have been at the State Capitol, and during the present year a total of over 71,000 examinations of specimens was made by the corp of workers on the staff.

Facilities For Study of Disease Germs

It is probably known to most of you that the first simple microscope came into use in the middle of the seventeenth century. Gradually, as better compound microscopes were produced, it was revealed that man is surrounded by tiny organisms invisible to the naked eye. It is less than sixty years ago, however, that Koch, the great scientist, first demonstrated that germs may cause disease. Since that discovery the application of the microscope to the study of disease has saved countless lives. Germs, or microbes, or bacteria, are found in the air we breathe, the water we drink, the food we eat, and upon everything we touch. The varieties that cause disease are able to grow inside our bodies and, in order that they may get food on which to live, they destroy our tissues and organs producing poisons and toxins that cause human disease and death.

In the laboratories these germs can be grown in broth and on gelatin so that they may be studied until we can learn how to recognize from what disease a patient is suffering, how to prevent the spread of the disease, and sometimes how to effect a cure or prevent the occurrence of the disease by the use of even the dead bacteria themselves or the products they produce. This great work of science should interest you because the benefits of our laboratory examinations are at all times available to you free through your local physician who is permitted to send to us for identification specimens of blood, pus, sputum or discharges from his patients suffering from contagious diseases. Your physician may know how to make many of these tests himself but if you know how many patients he sees daily, how much of his time is spent at the bedside of

very sick persons, with patients in his office, or in making long drives through the country you would readily see he cannot be expected to make laboratory tests which often require several hours to complete. It is not necessary for him to do so because the services of our laboratory experts are at his command and another group of our workers are constantly busy cooking and preparing the media or food on which the germs can grow,—washing, corking and labeling bottles and vials, or preparing and sterilizing swabs and needles, and then wrapping all these articles into packages or placing them in special mailing containers, and mailing and addressing them to every physician and every health officer in the State so that each physician can always have on hand a supply of all the materials necessary to send specimens from any patient he is called upon to treat for a contagious disease. So efficient is this service that a freshly sterilized mailing container is returned the same day by mail to each physician who sends us a specimen in any one of our laboratory outfits.

The Search For Typhoid Germs

All this is in preparation for our work of "gunning" for the bacteria. That begins the day or sometimes within the hour after you have called your physician because you felt sick. Probably you felt certain symptoms you could explain to the doctor but quite likely you did not know what was the cause of your illness. Your physician may have suspected from what disease you were suffering but, because the earliest symptoms of many diseases are oftentimes very similar, it may have been an impossibility for him to diagnose your illness without resort to laboratory aides. It may be your physician thought it wise to sterilize with alcohol a small area on the lobe of your ear, prick a tiny vein with a sterile needle and obtain a few drops of your blood which he placed in a little glass tube in one of those mailing containers I have spoken of and mailed to the laboratories—or even sent it by a messenger in an automobile or brought it himself as many physicians do in emergencies. He may even have told us, or written on the blank along with your name and age and address, that he suspected you might be developing a case of typhoid fever although he could not be quite certain it was not malaria or perhaps another disease.

As soon as it arrived at the laboratories our receiving clerk then opened the package, and with a little machine designed for that purpose stamped a number on the card bearing your name. He also placed the same number on the little glass tube containing your blood. This is so the person examining your blood does not know from whom it came but knows it by number only. The card then went on its way to our office so that

your name and address, and the physician's, could be placed on record, and so filed that it can be referred to very quickly no matter how many years later, and also, by the way, so that a freshly-prepared outfit can be sent back to your doctor the same day in case a member of your family or someone else has already contracted the disease from you and may have need to have a specimen sent tomorrow.

But while all this is being done, your blood sample has already gone into the laboratory and our microbiologist or an assistant has drawn off a carefully measured portion of the blood serum and added to it some salt solution and a few drops of a culture of a very pure strain of living 24-hour-old typhoid germs, and placed the specimen in an incubator that is kept at exactly the temperature of the inside of your body. Later this preparation is taken out and carefully examined under a microscope that enlarges the germs to several hundred times their actual size until they appear large enough to be seen by the naked eye. This is the real gunning for bacteria. Now in this particular test, if we are able to see that the typhoid germs we added are still alive and swimming about in a very lively fashion in your blood we can report we do not find that you have typhoid fever. But, if you did have that disease, the germs growing inside your system would doubtless have produced in your blood something that is called an immunity and the substance present in your blood would have killed the germs we added in our test. We could then report to your physician that you have typhoid fever and he could govern his treatment accordingly, and to your health officer who would know that a case of typhoid fever existed and could take steps to prevent its spread to others until later examinations of your body discharges indicated it was safe to allow you to prepare or handle food that other persons might eat.

Tracking Down Other Disease Germs

There is time only to mention some of our other laboratory procedures. Sputum specimens are examined for tubercle bacilli, the germs of tuberculosis. As we see them under the microscope, these bacteria are tiny red rods surrounded by tissue colored blue. Sputum from patients with pneumonia is typed to assist physicians in the treatment of that disease. Material from the noses and throats of suspected cases of diphtheria is placed under the microscope to look for not only the germs of diphtheria but for the possible presence of the organisms producing Vincent's angina and the hemolytic streptococci that might cause scarlet fever. Blood samples are searched for paratyphoid bacilli and for malarial parasites. Also, 18,000 samples of blood were examined the past year by the Wassermann test. Feces and urine are inspected for

dysentery bacilli and for typhoid and paratyphoid organisms. Blood of horses is tested for glanders, but, fortunately, only once in twenty-one years have the laboratories been called upon to examine the blood of a human being for the germs of that disease, which is almost with certainty fatal to man. At various times our workers are kept unusually busy sectioning the brains from animals that have died or been killed while suffering from rabies, because several "mad" dogs have spread this virus in certain sections of the state. During the past year a few specimens have come to us from patients with anthrax, a rare disease in Connecticut.

Milk and Water Samples are Examined

Samples of milk and cream sold in the cities and towns of Connecticut are reaching the laboratories for test each day. If your town is not receiving its full quota of this free service for the protection of health you should consult your local health officer. All of the public drinking water supplies of the state are now analyzed periodically, most of them once a month. Samples of water are also collected regularly from the swimming pools of the State, and our department is studying all the drinking waters used by school children. Many samples of oysters are taken from the beds where the oysters grow in salt water and from where they are sold in stores. Clinical thermometers used by physicians and in hospitals cannot legally be sold in Connecticut until a representative portion of them has been certified in the Bureau of Laboratories.

Laboratory Open For Inspection

I hope I have called to the attention of many the variety and importance of this great health activity. Large numbers of physicians and health officers visit the laboratories each year, and tours of inspection through the laboratories are often made by parties of nurses, students or health officials. If any interested persons desire to arrange to have the work of the Bureau of Laboratories demonstrated and explained to any organization that can visit the laboratories in a body, a request for that privilege should be addressed to the State Department of Health.

Public Health Nursing

PUBLIC HEALTH NURSING ACTIVITIES

The first of each month brings to the Bureau of Public Health Nursing of the State Department of Health reports from associations doing public health nursing work.

A summary of those reports received during January brings out some interesting figures, as shown by the following comparisons:

A total of 25,666 patients was carried during the month, a number larger than the population of the city of Middletown and about equal to the populations each of Bristol, Greenwich and Torrington. Of these, 3,871 new patients were placed under care.

General Patients

The 1923 new general patients admitted during the month number more than the 1,385 total bed capacity of the five general hospitals in New Haven and Bridgeport. The total number of general patients cared for during the month, 3,377, about equals the number of patients cared for by the Stamford Hospital for an entire year.

Maternity Patients

If the number of maternity patients, 855, cared for by the public health nurses were admitted to hospitals at one time they would almost fill all the beds available for maternity service in the state. The 409 new babies reported as having received care are one less than the total number of beds in the New Haven Hospital.

Tuberculosis Patients

One and a half as many pulmonary tuberculosis patients were cared for as there are beds in the five state tuberculosis sanatoria combined; while the number of tuberculosis contact cases under observation was almost twice as many as the total number of these beds.

Rounding up the results of the month's work is illuminating, and reacts to the advantage of public health nursing associations since it interprets its activities to the public and helps the community evaluate the work.

Forms for monthly reporting are supplied by the State Department of Health.

NEWS NOTES FROM THE FIELD

Physicians Licensed

During the month of March the following physicians have been licensed by the State Department of Health:
New London, Conn., Gray, Ellis B., 145 Huntington Street.
New Haven, Conn., Lindsay, Merrill K., Yale University.

Health Officers Appointed

William W. Bierce, Litchfield county health officer, has made the following appointments:

Dr. Jerome S. Chaffee as health officer of Sharon, succeeding Dr. Bassett, who recently died.

Mr. J. Campbell Haywood, as health officer of Warren, succeeding Mr. David Strong.

Institute for Board Members

As this bulletin goes to press the Institute for Board Members of Public Health Nursing organizations is still in progress at New Haven. Unique in the history of public health nursing this Institute conceived by two Connecticut women, Mrs. C. E. A. Winslow and Mrs. John T. Huntington and sponsored by the New Haven Visiting Nurse Association and the National Organization has achieved a triumph in community health progress by offering those in charge of public health nursing association, the privilege of meeting together to discuss their common problems. That directors have welcomed this opportunity is shown by the unusual response to this four days' Institute. One hundred and fifty board members, representing 95 different organizations, have registered and are in attendance at the various sessions. They are here from Montreal, from Michigan, from Indiana, from Virginia, and from all states within those boundaries.

Every conceivable angle of public health nursing organization and field service has been presented; names well known in the public health field appear on the program and the enthusiasm evident at each session is allowed free expression at the various round table discussions that follow each morning and afternoon session. Thus have many perplexing problems been clarified, thus has new inspiration been acquired. Copious notes have been accumulated by each delegate so that no point may be lost in presenting a full and complete review of the Institute "back home" when each board member returns.

Connecticut Conference of Social Work

The 1927 program for the State Council of Social Work is to be held on April 24-27 in Hartford with headquarters at Hotel Bond. As usual the sessions are full of interesting and worth while subjects and the program seems, even more than ever to embrace all the subjects that such a conference should cover.

Preventable Diseases

INCIDENCE OF DISEASE FOR MONTH OF MARCH, 1927

(As compared with previous years)

A comparison of the daily morbidity reports received during the month of March, 1927, with the corresponding month for the years 1922, 1923, 1924, 1925 and 1926.

DISEASE	Average 1922-1926 for March	Mean 1922-1926 for March	1922	1923	1924	1925	1926	1927
Cerebrospinal Meningitis	7	7	14	9	7	3	4	1
Diphtheria	224	206	271	259	195	206	190	123
Encephalitis Epidemic	9	6	6	29	6	4	2	....
Measles	1,637	782	776	1,327	782	632	4,670	600
Poliomyelitis	1	2	1	1	2	....	2	1
Scarlet Fever	519	421	366	372	806	637	421	538
Smallpox	30	115	115	6	29	....	....	....
Typhoid Fever	10	11	11	9	12	12	6	2
Tuberculosis Pulmonary	136	142	142	144	125	124	145	122
Whooping Cough	276	253	145	253	187	292	503	220

A comparison of the morbidity on these diseases for the two preceding months, January and February with the March record is as follows:

	January	February	March
Cerebrospinal Meningitis	5	5	1
Diphtheria	139	128	123
Encephalitis Epidemic	3	6	....
Measles	145	408	600
Poliomyelitis	2	1	1
Scarlet Fever	428	437	538
Smallpox	....	....	....
Typhoid Fever	11	4	2
Tuberculosis Pulmonary	114	116	122
Whooping Cough	238	179	220

Cases of Other Reportable Diseases

Chickenpox	501	Septic Sore Throat	15
German Measles	45	Trichinosis	1
Influenza	77	Gonorrhoea	112
Malaria	1	Syphilis	107
Mumps	198		
Paratyphoid Fever	1	Total	1,058

Cases of Occupational Diseases

Conjunctivitis from Fulminate of Mercury	2	Toxic Dermatitis from Fulminate of Mercury	44
Toxic Dermatitis, Conjunctivitis from Fulminate of Mercury	4	Total	50

Cases of Certain Reportable Diseases

March, 1927

	Population Est. as of July 1, 1927	Typhoid Fever	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Meningitis Cerebrospinal	Poliomyelitis	Pulmonary Tuberculosis	Other Forms Tuberculosis	Pneumonia Lobar	Broncho-Pneumonia	Other Com. Diseases
State Total	**1,586,435**	**2**	**600**	**538**	**220**	**123**	**1**	**1**	**122**	**14**	**242**	**186**	**1058**
NEW HAVEN CO.	**475,419**	**1**	**9**	**120**	**20**	**48**			**45**	**6**	**61**	**48**	**281**
New Haven	184,727	1	2	23	3	3			20	4	17	4	165
Waterbury	105,960		2	22	1	10			15		11	16	15
Meriden (city and town)	36,807			27	9				6	1	19	15	47
Ansonia	19,548			1							1	1	5
West Haven	18,834		1	8		4			2	1	3	6	4
Naugatuck	16,829			4		15							
Wallingford (town and boro)	12,659								1				
Milford	14,673		3	6	6						3	3	5
Derby	12,963					4							
Hamden	10,718		1	21		4					3	1	20
Branford (town and boro)	7,073					6					2		6
Seymour	8,321			2							2		3
Towns under 5,000	26,307			6	1	2			1			2	11
FAIRFIELD CO.	**379,505**		**58**	**162**	**65**	**41**	**1**		**23**	**2**	**71**	**33**	**313**
Bridgeport	174,890		35	57	1	26	1		17	1	33	20	61
Stamford (city and town)	48,515		4	44	18	3					8	1	71
Norwalk	30,173		5	6	6	3			2		4	3	31
Danbury (city and town)	21,921			1								1	3
Greenwich (town and boro)	26,373		1	20	37	3					14	2	31
Stratford	17,451		1	8	1	5			2		2	1	1
Fairfield	15,541		4	11					1				58
Shelton	11,699			3							1		
Westport	5,772												
Towns under 5,000	27,160		8	12	2	1			1	1	9	5	57
HARTFORD CO.	**402,344**	**1**	**421**	**127**	**61**	**23**		**1**	**28**	**5**	**62**	**69**	**261**
Hartford	168,258		6	54	18	8			13	2	21	39	117
New Britain	71,068		2	21	11	5			6		15	4	30
Bristol (city and town)	26,087		406	13	4	2			4		7	4	15
Manchester	21,992		2	1		3		1			4	3	15
Enfield	13,241			1		1			2		2	1	5
East Hartford	14,311		2	4		1					6	2	6
Southington (town and boro)	9,925		2	3							2		4
West Hartford	11,908		1	9	6	2			1	1	1	4	22
Windsor	6,732			1	1	1							3
Glastonbury	6,206			1								4	22
Wethersfield	5,264			2	6				1		1		8
Plainville	5,064			8	3							3	
Towns under 5,000	42,288	1		9	12				1	2	3	5	14
NEW LONDON CO.	**114,930**		**8**	**60**	**7**	**6**			**10**	**1**	**25**	**11**	**43**
Norwich (city and town)	30,689		1	42	4	2			3	1	12	5	13
New London	30,149			10	3	3			3		4	3	13
Stonington (town and boro)	11,041			3									3
Groton (town and boro)	11,326			2		1					6		8
Towns under 5,000	31,725		7	3					4		3	3	6
LITCHFIELD CO.	**80,900**		**4**	**5**	**23**	**2**			**2**		**4**	**3**	**27**
Torrington (town and boro)	25,316								1				
Winchester (inc. Winsted	9,109												
Plymouth	6,459		4	1		1					2	2	3
Watertown	7,506												
Towns under 5,000	32,510			4	23	1			1		2	1	24
WINDHAM CO.	**56,258**		**100**	**36**	**19**	**3**			**3**		**2**	**6**	**8**
Windham (inc. Willimantic)	14,418			7									3
Putnam (city and town)	9,220			10	1	1					1		2
Plainfield	8,818		47	2		2			1		1	1	
Killingly (inc. Danielson)	5,226		2	8					2			2	
Thompson	9,384				2								3
Towns under 5,000	9,192		51	9	16							3	
MIDDLESEX CO.	**49,279**			**23**	**17**				**10**		**15**	**14**	**109**
Middletown (city and town)	22,032			3	17				4		8	11	45
Middletown State Hospital									6				8
Towns under 5,000	26,347			20							7	3	56
TOLLAND CO.	**27,800**			**5**	**8**				**1**		**2**	**2**	**16**
Vernon (inc. Rockville)	8,751			4							1		1
Stafford (town and boro)	5,472				4							1	
Towns under 5,000	13,577			1	4				1		1	1	15

Laboratories

SUMMARY OF BUREAU ACTIVITIES FOR MARCH, 1927

DIAGNOSTIC

	+	—	?	Unclassified	Total	
Typhoid	1	87	....	....	88	
Paratyphoid A	....	88	....	....	88	
Paratyphoid B	....	88	....	....	88	
Diphtheria	151	2,142	....	....	2,293	
Diphtheria Virulence	9	41	....	....	50	
Vincent's Angina	10	806	....	....	816	
Haemolytic Streptococci	51	761	....	....	812	
Tuberculosis	20	123	....	....	143	
Syphilis	269	2,331	233	....	2,833	
Gonorrhoea	22	115	....	....	137	
Pneumonia	6	1	....	....	7	
Rabies	2	7	....	....	9	
Special Specimens	1	8	....	78	87	7,451

CHEMICAL AND BACTERIOLOGICAL

Milk samples	318	
Water samples	182	
Sewage samples	142	
Sea Food samples	1	
Clinical thermometers	252	895
Total examinations made		8,346

The Laboratories Will Assist Certified Milk Producers

Although the month of March was by far the largest corresponding month in the history of the laboratories and more examinations were carried out than in February or January of this year, an additional type of work is contemplated, beginning April 1. Under a new regulation of the Milk Regulation Board, each person employed about the barn or dairy of any farm producing certified milk must have laboratory examinations once a month to determine the absence of diphtheria, scarlet and typhoid fevers, tuberculosis and syphilis. The laboratories have already received requests for large numbers of mailing containers for these specimens.

Vital Statistics

MONTH OF FEBRUARY

TOTALS FOR FIRST TWO MONTHS OF THE YEAR, 1927, 1926, 1925

	Births	Birth Rate*	Marriages	Mar. Rate*	Deaths	Death Rate*
1927	4,298	16.3±.1	1,434	5.4±.05	3,023	11.4±.1
1926	4,795	18.5±.1	1,511	5.8±.06	3,194	12.3±.1
1925	4,884	19.1±.1	1,697	6.3±.06	3,194	12.5±.1

*Rate on annual basis, per 1,000 population.

The birth rate is exceptionally low, as it has been for some time. There is evidence that this decrease in birth rate is not characteristic of Connecticut alone but that other states are also experiencing marked decline in births. There are many factors entering into this decrease. A favorite way of discussing the matter used to be "economic conditions". The feature of economic conditions was that it also would account for an increase in births. Then for a while we had the war to blame for many things; but now it takes serious thought. Economic conditions are not the worst and we are not involved in a war.

For one thing there are fewer marriages. For another thing the immigration laws may be excluding the more prolific foreigner.

The record for deaths is quite astonishing. The number reported, exactly 1400, is less than any year since 1922, and less by no inconsiderable number. Compared with 1923, 1927 is 437 below. With the good start in January and such a favorable February the rate so far this year is 11.4. Quite generally this is over 12.0. The decrease will be analyzed in more detail in this article.

Births

Records of 2,135 births were received in February. This total is 92 less than the number reported in 1926. The birth rate for 1927 is 16.1, somewhat lower than the 16.4 reported for January but the fact must not be lost sight of that February is a month of only 28 days.

There are 49 towns having populations over 5,000 and of these 49 there were 25 reporting more births for 1927 than for 1926. The explanation of this fact is that in allocating the births according to residence of the mother the smaller towns gain and the larger towns lose. The larger towns are where the mothers go in order to receive hospital care, and a year ago these larger towns got credit for the births. To

illustrate the effect, Bridgeport shows 15 less births, Hartford 62 fewer, New Haven 32, Waterbury 16 less.

As to increases over 10, the following towns over 5,000 show:

Ansonia	21± 9	Meriden	24±10
Greenwich	10± 8	New Britain	18±15
Groton	14± 5	Stamford	14±12
	West Hartford	11± 6	

Some of these increases are worthy of note. Those for Ansonia, Groton and Meriden are significant. Were it not for the allocation of births the increases might mean that possibly an upward trend of birth rates had been started. But while Ansonia has gained, Derby has lost 10, and correlated with the increase of Groton is a decrease of 28 for New London.

By a strange coincidence a number of towns reported exactly the same number of births in both years, such numbers being no less than 5 namely the following: Danbury, Enfield, Plainfield, Stratford and Wallingford.

Stillbirths

For the month 68 stillbirths were reported making a grand total of 2,203 births of which the stillbirths constitute 3.09 per cent. In 1926 there were 74 stillbirths among 2,301 total births or 3.21 per cent of the total births were stillbirths.

These statistical facts are perhaps better illustrated by rates per 1,000 total births, on a monthly basis. Changing to this method of presentation gives, for 1927, a rate of 32.1±3.6 stillbirths in every 1,000 and 30.9±3.8 for 1926. There is no significant difference in these rates.

With respect to the sex distribution of the stillbirths 35 were males and 33 females for 1927 yielding a sex ratio of 106 males to 100 females, which is remarkably low. In an analysis over 29 years for the sex distribution of stillbirths the sex ratio ran 144 males to 100 females.

Deaths

Records of exactly 1,400 deaths were received during the month to give the low rate of 10.6 per 1,000 population, annual basis. This is exceptionally low for this season of the year and promises well for the year. In the past 6 years the previous low rate was 11.7 for 1926 and the previous high rate was 14.9 in 1923. There is a great difference between a rate of 10.6 and 14.9!

The new process of allocation has changed the rate in many towns. The larger towns with greater hospital facilities have

experienced lower rates. Exhibiting a few rates in tabular form for 1927 and 1926 gives the following:

City	Rates		City	Rates	
	1927	1926		1927	1926
Ansonia	12.3	7.5	Middletown	8.9	14.2
Bridgeport	8.6	10.8	Milford	12.3	6.0
Danbury	15.9	17.0	Naugatuck	10.0	5.1
Derby	9.3	11.2	New Haven	10.9	12.5
Hartford	10.3	12.3	Norwich	12.1	17.7
Meriden	9.1	13.1	Putnam	7.8	18.4

A table for certain diseases, comparing 1927 with 1926 follows:

Cause of Death	1927	1926	Increase	Decrease
Diseases of the heart	253±16	250±16	3±22	....
Epidemic Encephalitis	2± 1	3± 2	....	1± 2
Pneumonia undefined	3± 2	3± 2	....	....
Typhoid fever	1± 1	2± 1	....	1± 2
Measles	4± 2	39± 6	....	35± 7
Scarlet fever	0	4± 2	....	4± 2
Whooping cough	8± 3	11± 3	....	3± 4
Diphtheria	9± 3	13± 4	....	4± 5
Influenza	30± 5	41± 6	....	11± 8
Tuberculosis pulmonary	86± 9	95±10	....	9±13
Tuberculosis other forms	10± 3	9± 3	1± 4	....
Cancer	119±11	133±12	....	14±16
Cerebrospinal meningitis	2± 1	0	2± 1	....
Poliomyelitis	1± 1	1± 1	....	....
Pneumonia lobar	73± 9	100±10	....	27±13
Pneumonia broncho	69± 8	57± 8	12±11	....
Diarrhoea and Enteritis (Under 2)	11± 3	15± 4	....	4± 5
Puerperal diseases	15± 4	12± 3	3± 5	....
Accident	75± 9	71± 9	4±12	....
Suicide	17± 4	14± 4	3± 6	....
Homicide	3± 2	2± 1	1± 2	....
Other causes	609±25	645±25	....	36±35
Total	1,400±37	1,520±39	29	149

There is no increase of consequence. There are several decreases of significance. There is a decided drop in measles. And there are noteworthy decreases in scarlet fever and lobar pneumonia. Under the item of "other causes" there is a decrease of 36 and the exact place where this decrease occurred is lost sight of.

There are other decreases also but the value of the chance fluctuation is of such a magnitude with reference to the reduction itself that a warning signal is thereby indicated. Thus, there was a decrease in influenza, pulmonary tuberculosis, and cancer which are encouraging even if it is dangerous to depend on the continuance of the reduction.

There were some deaths due to automobile accidents, of course. Sixteen in comparison with 10 in 1926. In February 1926 there was much heavy snow and none in 1927.

FOR SIX YEARS—FEBRUARY, 1927

CONNECTICUT	1922	1923	1924	1925	1926	1927
BIRTHS	2563	2353	2483	2267	2227	2135
Birth Rate	21.2	19.1	19.8	17.8	17.1	16.1
DEATHS	1750	1837	1605	1507	1520	1400
Death Rate	14.5	14.9	12.8	11.8	11.7	10.6
MARRIAGES	796	715	836	812	735	738
Marriage Rate	6.6	5.8	6.7	6.4	5.7	5.8
COMMUNICABLE DIS.* DEATHS	326	334	205	178	206	139
Per Cent to Total Deaths	18.6	18.2	12.8	11.8	13.6	10.0
DEATHS UNDER 1 YEAR	249	210	218	190	185	155
Rate Per 1,000 Births	95.5	81.8	82.6	77.1	75.7	65.2

*Includes Typhoid Fever, Measles, Scarlet Fever, Whooping Cough, Diphtheria, Tuberculosis Pulmonary, Cerebrospinal Meningitis, Poliomyelitis, Influenza.

Statistics
February, 1927

	Population Est. as of July 1, 1927 Based on U. S. Census	TOTALS				DEATH RATES			AGE GROUPS		
		Births	Stillbirths	Marriages	Deaths	All Causes (per 1,000 population)	Tuberculosis (per 1,000 population)	Children under 1 year (per 1,000 births)	Under 1 year	1 to 5 years	65 years and over
State of Connecticut	1,586,435	2135	68	738	1400	10.6	0.6	65.2	155	54	514
Ansonia	19,548	34	.....	12	20	12.3	.....	.....	.....	1	6
Branford	7,073	10	1	2	7	11.9	.....	98.4	1	.....	1
Bridgeport	174,890	206	12	87	125	8.6	0.8	43.1	11	10	42
Bristol	26,087	53	3	11	18	8.3	.....	161.6	8	3	4
Danbury	21,931	39	1	15	29	15.9	.....	182.5	8	2	6
Derby	12,963	17	2	5	10	9.3	1.8	28.3	1	.....	2
East Hartford	14,311	15	.....	9	13	10.9	.....	.....	.....	1	5
Enfield	13,241	22	.....	9	5	4.5	0.9	.....	.....	.....	.....
Fairfield	15,541	8	.....	3	11	8.5	.....	.....	.....	.....	4
Glastonbury	6,206	5	.....	1	6	11.6	.....	164.3	1	.....	3
Greenwich	26,373	41	.....	33	16	7.3	0.9	78.7	3	.....	7
Groton	11,326	18	1	5	11	11.7	1.1	110.1	1	.....	5
Hamden	10,718	18	.....	.....	18	20.2	1.1	71.4	1	.....	11
Hartford	168,258	244	3	87	144	10.3	0.8	60.7	20	5	38
Killingly	9,384	14	.....	10	17	21.7	2.6	153.8	2	.....	6
Manchester	21,992	27	1	4	16	8.7	1.1	53.1	2	1	6
Meriden	36,807	58	2	12	28	9.1	0.7	63.7	4	.....	14
Middletown	22,932	26	1	13	17	8.9	0.5	41.2	2	1	9
Milford	14,673	13	3	3	15	12.3	0.8	181.8	2	.....	5
Naugatuck	16,829	16	.....	3	14	10.0	1.4	.....	.....	.....	4
New Britain	71,068	121	5	45	61	10.3	0.8	65.1	9	2	20
New Haven	184,727	244	11	88	168	10.9	0.2	56.5	18	3	69
New London	30,149	36	3	25	28	11.1	0.4	64.5	4	2	11
Norwalk	30,173	36	2	17	25	9.9	0.4	37.2	2	.....	11
Norwich	30,689	33	2	25	31	12.1	0.8	31.1	2	1	11
Plainfield	8,818	10	.....	6	6	8.2	.....	.....	.....	1	2
Plainville	5,064	8	.....	6	3	7.1	.....	10.5	1	.....	1
Plymouth	6,459	10	.....	4	8	14.9	3.7	151.8	1	.....	1
Putnam	9,220	11	.....	9	6	7.8	.....	182.7	3	.....	1
Seymour	8,321	8	.....	2	7	10.1	.....	120.0	1	.....	3
Shelton	11,699	13	1	4	10	10.3	2.0	.....	.....	.....	4
Southington	9,925	17	.....	1	7	8.5	1.2	.....	.....	1	3
Stafford	5,472	10	1	1	6	13.2	.....	.....	.....	.....	2
Stamford	48,515	82	.....	25	46	11.4	0.2	74.6	7	2	18
Stonington	11,041	10	.....	8	13	14.1	.....	75.9	1	1	7
Stratford	17,451	16	.....	5	12	8.3	1.4	.....	.....	1	4
Thompson	5,226	6	.....	3	7	16.1	2.3	.....	.....	.....	2
Torrington	25,316	25	2	12	15	7.1	0.5	49.0	2	1	5
Vernon	8,751	11	1	4	9	12.3	1.4	.....	.....	.....	4
Wallingford	12,659	8	.....	4	12	11.4	2.8	85.7	1	.....	7
Waterbury	105,960	139	4	41	88	10.0	0.3	59.6	11	5	21
Watertown	7,506	11	.....	2	9	14.4	.....	137.9	1	.....	3
West Hartford	11,908	25	.....	1	14	14.1	1.0	271.2	4	1	3
West Haven	18,834	27	.....	4	15	9.6	1.9	.....	.....	1	3
Westport	5,772	6	.....	.....	5	10.4	2.1	203.4	1	.....	1
Wethersfield	5,264	10	.....	3	4	9.1	.....	.....	.....	.....	1
Winchester	9,104	8	.....	3	10	13.2	.....	.....	.....	.....	4
Windham	14,418	24	.....	8	12	10.0	0.8	.....	.....	.....	7
Windsor	6,732	9	.....	.....	7	12.5	.....	137.9	1	1	2
Towns under 5,000	209,106	239	6	58	195	10.9	0.5	63.7	17	7	98
Other States	.....	38	.....	.....	21	.....	.....	.....	2	.....	7

DEATHS FROM IMPORTANT CAUSES

Diseases of the Heart	Encephalitis Epidemic	Pneumonia Undefined	Typhoid Fever	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Influenza	Tuberculosis-Pulmonary	Tuberculosis Other forms	Cancer	Meningitis-Cerebrospinal	Poliomyelitis	Pneumonia—Lobar	Pneumonia—Broncho	Diarrhoea-Enteritis Under 2	Puerperal Diseases	Accident	Suicide	Homicide	Institutional Deaths	Non-resident Deaths
253	2	3	1	4	.....	8	9	30	86	10	119	2	1	73	69	11	15	75	17	3	495	.....
3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	2	3	1	.....	7	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	3	.....
26	1	1	.....	.....	.....	.....	4	3	13	.....	5	.....	.....	7	6	2	1	10	1	.....	45	.....
1	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	1	.....	.....	.....	.....	2	.....
4	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	1	.....	.....	.....	4	.....	.....	2	.....	.....	12	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	1	.....	.....	1	.....	.....	.....	.....	.....	.....	2	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	2	.....	.....	.....	.....	.....	.....	6	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....	1	.....	.....	.....	1	.....
5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	1	.....	.....	3	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....
.....	.....	.....	.....	.....	.....	.....	.....	3	2	.....	1	.....	.....	.....	.....	1	.....	1	.....	.....	9	.....
3	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	3	.....	.....	1	.....	.....	.....	.....	.....	.....	3	.....
2	.....	.....	1	.....	.....	.....	.....	.....	1	.....	2	.....	.....	3	1	.....	.....	1	.....	.....	4	.....
31	.....	.....	.....	.....	.....	.....	.....	2	11	3	12	2	.....	7	14	3	3	4	3	1	74	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....
2	.....	.....	.....	.....	.....	.....	1	.....	2	.....	1	.....	.....	1	1	.....	.....	.....	1	.....	5	.....
4	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	6	.....	.....	1	1	1	.....	.....	.....	.....	8	.....
3	.....	.....	.....	1	.....	.....	.....	.....	1	.....	2	.....	.....	1	3	.....	.....	.....	.....	.....	5	.....
3	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	4	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	2	1	1	.....	.....	2	.....	.....	.....	.....	.....	.....	6	.....
11	.....	.....	.....	.....	.....	3	.....	2	5	1	5	.....	.....	2	5	.....	.....	5	1	.....	18	.....
35	1	2	.....	.....	.....	.....	.....	1	3	1	14	.....	.....	9	8	.....	2	9	1	.....	73	.....
7	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	2	.....	.....	1	2	.....	.....	1	.....	.....	10	.....
5	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	3	.....	.....	3	.....	.....	.....	2	1	.....	8	.....
6	.....	.....	.....	.....	.....	.....	1	1	2	.....	5	.....	.....	.....	1	.....	.....	1	.....	.....	15	.....
.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....	2	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1	.....	.....	1	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	2	.....	.....	.....	.....	.....	1	1	.....	.....	2	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1	.....	.....	.....	1	.....	.....	1	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1	.....	2	.....
6	.....	.....	.....	.....	.....	1	1	4	1	.....	.....	.....	.....	2	2	.....	.....	3	1	.....	19	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	1	.....	1	.....	.....	.....	4	.....
2	.....	.....	.....	.....	.....	.....	1	.....	2	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1	.....	.....	2	.....	.....	2	.....
2	.....	.....	.....	.....	.....	1	1	.....	1	.....	.....	.....	.....	1	1	.....	.....	2	.....	1	3	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	1	1	.....	1	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	2	.....	.....	1	.....	.....	.....	.....	.....	.....	3	.....
11	.....	.....	.....	.....	.....	.....	.....	1	3	2	7	.....	.....	6	1	3	.....	7	2	.....	32	.....
1	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....	.....	.....	1	.....	1	.....	.....	.....	2	.....
2	.....	.....	.....	.....	.....	.....	.....	2	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	4	.....
4	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	1	.....	.....	1	1	.....	.....	.....	.....	.....	5	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1	.....	.....	.....	.....	1	.....	3	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	2	.....
4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	2	.....
4	.....	.....	.....	.....	.....	.....	.....	1	1	.....	1	.....	.....	1	.....	.....	.....	.....	.....	.....	4	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....	.....	4	.....
36	.....	.....	.....	.....	.....	3	.....	7	9	1	22	.....	1	10	10	.....	2	11	1	1	49	.....
5	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	2	.....	.....	3	1	.....	1	1	.....	.....	12	.....

HOW PHYSICIANS ARE LOCATED IN CONNECTICUT TOWNS

Cities and Towns		Size of town or city population			Physicians
4		over		100,000	946
1		50,000	to	99,999	60
8		25,000	"	49,999	313
19		10,000	"	24,999	234
17		5,000	"	9,999	97
11		4,000	"	4,999	47
9	(out of 10 towns	3,000	"	3,999	33
14	" " 19 "	2,000	"	2,999	48
28	" " 39 "	1,000	"	1,999	46
7	" " 24 "	500	to	999	13
1	" " 17 "	under		499	2
119	169 total				1,839

Library, Hygienic Laboratory,
25th & E. Sts., N.W.,
Washington, D.C.

State of Connecticut Health Bulletin

"For a Clean State and a Healthy People"

Vol. 41 May, 1927 No. 5

This Issue Contains

The Summer Round-up of Children

Laboratory Examinations of Water

Food Magic

News Notes From the Field

Births, Deaths and Marriages for March, 1927

Summary of Laboratory Activities for April, 1927

Incidence of Preventable Diseases for April, 1927

Protect Against Typhoid

STANLEY H. OSBORN, M. D., C. P. H., Commissioner

ISSUED BY
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ALL CORRESPONDENCE, except for laboratory outfits, should be directed to
CONNECTICUT STATE DEPARTMENT OF HEALTH
8 WASHINGTON STREET,
HARTFORD

CONNECTICUT
HEALTH BULLETIN

Vol. 41 May, 1927 No. 5

Issued Monthly by the
STATE DEPARTMENT OF HEALTH

THE SUMMER ROUND-UP OF CHILDREN

By A. Elizabeth Ingraham

Once more summer is approaching and again we are confronted with the problem of our pre-school children who will be old enough to enter school for the first time this fall. Approximately 30,000 children enter the Connecticut schools each year. What proportion of that number is in each of your communities? Are there any in your family?

Where Does Your Child Stand

How could you answer some of the following questions?

Has your child nearly doubled his weight since his second year? Has he been growing during this period at the rate of about three inches annually? Are his bones strong and straight?

How about his teeth?

At the completion of the sixth year the child's brain has grown to its full size. During this time of brain growth has over-stimulation been guarded against so carefully that the nerve cells of his brain have not been irritated to the point of making Johnnie a nervous child?

We want also to know if his mental has kept pace with his physical growth. If not, there may be some cause that may be found and corrected.

Has he escaped thus far the various childhood diseases, some of which may impair his body functions? If he has not been so fortunate then it is important to know the condition of the heart and kidneys, and superficial glands.

All of these self-asked questions lead us to see the importance of getting these children together that they may be inspected and examined thoroughly by their family physicians and kept under observation up to the time of the opening of next fall's term of school.

Some of the Pitfalls

Your child is now on the threshold of a new phase of life. He must learn to adapt himself to the new duties for which he will need to be in good physical condition. There must be no eyestrain when he tries to see the lessons on the blackboard, no diseased tonsils or adenoids, or decayed teeth that may act as disease germ distributing centers to other parts of his body; no incorrect posture that may become rapidly worse as he tries to accustom his body to the new seats in which he must remain for four to five hours a day. Your child from now on will be in contact with many other children. For this reason we should see that, in as far as possible, he is protected from communicable diseases.

We are going to make the next few months a "periodic getting together time" of the five and six year old children, to find through examination their physical status.

Susie's growth is not to be measured by how many inches mother had to let down the hem of her last summer's dress, but rather by the standard of the condition of her body. Is her back flat or are her shoulder blades projecting with the attendant beginning round shoulders; is her spine straight or is it beginning to be deflected from normal; has she nicely hollowed arches or are her feet beginning to flatten; beside many other points to be looked into to determine if her growth has been normal when measured by the health yard stick.

A Look Into the Future

We are not playing the game of life straight with our children unless they are given every opportunity of learning the rules of health, and unless we do our part toward securing their observance.

Out of 22,000,000* school children examined, 15,000,000, or more than two-fifths, were found to have defects that should have been corrected before their school life began. Surely we who have the care of little children are not wilfully neglectful of their well being. It is because we do not realize the consequences of delay that things are allowed to drift along. This pre-school work is urged that we may give to the schools healthy students, to future homes strong parents, to the state and nation better citizens, and to the world at large progress through a higher form of civilization.

*American Child Health Association Bulletin.

LABORATORY EXAMINATIONS OF WATER

By Friend Lee Mickle

With the approach of warm weather the laboratories will probably receive the usual increased number of requests for examination of water from wells and springs about the state to determine if it is safe for drinking purposes. The public seems to have an impression that there is need for examination of water supplies only during the warm months of the year. This is a mistaken idea since streams are more heavily polluted in winter months when the ground water level is higher and also during the spring and fall when the rains are frequent and heavy. Water supplies of doubtful character should be checked by regular examination at different months of the year.

Local Arrangements for Water Examination

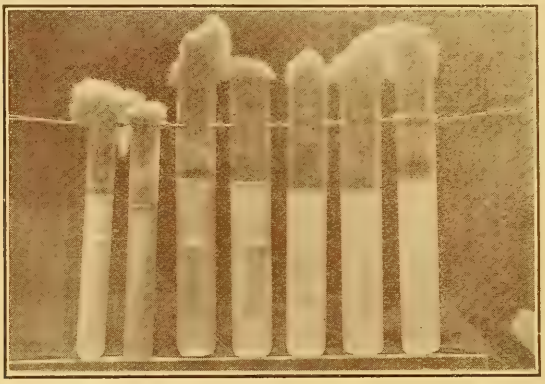
The Bureau of Laboratories makes free examinations of private water supplies, when their examination is a matter of the public health and when the need or desirability of an examination has first been passed upon by the local health officer. When physicians desire examinations of samples of water from wells or springs it is accordingly necessary for them to consult the local health officer of the town in which the supply is located.

Samples of water for laboratory examination are accepted only when they are collected in containers sent out from the laboratories where they have been specially prepared for such purpose. Directions are enclosed regarding the collection of the sample, but all samples should be collected by health officers, who are qualified for undertaking that work. It is also very necessary that a careful inspection be made and information furnished to the laboratories regarding the sources of the sample. This will assist in making an intelligent classification of the sample after the examination is completed in case there is any possibility that intestinal discharges from human sources have gained access to the supply.

The Laboratory Examination

In the laboratories an examination is made of bacterial content of the sample and certain chemical tests are made that assist in forming an opinion of the sanitary quality of the water. The number of bacteria that will grow under standard conditions in the laboratory at body temperature is of importance and the types of bacteria that produce or fail to produce gas are taken as an index of the purity of the

water. The presence of bacteria that produce gas in fermentation tubes is considered evidence of the Colon group of bacteria, a class of organisms that are found in the intestinal tracts of man and animals, and that are evidence that the supply is being polluted with sewage, or that disease-producing bacteria may be present.



GAS FORMATION INDICATING PRESENCE OF COLON GROUP

Know Before You Drink

It is never safe to take for granted that clear, sparkling water is pure. It is often highly polluted with waste from privies, septic tanks or cesspools and waste material from other sources. On the other hand, cloudy water with a disagreeable taste and smell may occasionally be safe for drinking purposes if it is situated at a distance from any source of possible contamination, the cloudiness being due to silt and not sewage.

FOOD MAGIC

By Elizabeth C. Nickerson

We wended our way over toward that exhibit at the Exposition of Progress in New Haven, where a crowd had gathered. Like the others we were curious! For here were two cages each containing a white rat, that is, white except for certain vivid identification spots of color which nature was not responsible for.

At the left was a rat which for size and plumpness and glossiness of coat were all that could be desired in a normally healthy rat. We noted with interest that he had been fed on a normal diet with just the right balance of mineral elements and protein and calories, and vitamins including lettuce as the sole source of vitamin C.

In the corresponding cage reposed a rat of half proportions. The visitor who hurried by without reading the accompanying legends might, with reason, have supposed that this rat was but half the age of the first rat. But from the card one learned that the two rats were the same age, from the same litter, in fact. What was the answer to this riddle? We scanned the card still further and found that lettuce was entirely responsible for the result. The diet of the two rats was identical except for the addition of lettuce supplying vitamin C in that of the larger rat, while this factor had been entirely lacking in the diet of the smaller rat.

Thus the magic of food! If the lack of some green stuff had such a profound effect on these animals what must happen to young children whose growth needs are even more urgent? The lesson that this demonstration taught should be in the hands of every mother so that she may provide for her little ones all those elements which are essential to the normal development of height and weight and healthy bone and tooth structure. May not some under-developed, puny, sickly child be the result of just such failure to provide regularly in the child's diet green stuff in the form of lettuce and spinach and string beans and many others.

We owe a great debt to the nutrition scientists who have thus been able to demonstrate tangible results when some vital factor is missing in the diet during growth. That vitamin C, whose sources are green vegetables, raw fruits, and milk to a certain extent, has also such an influence on growth in the very young is perhaps not enough understood by those who are already convinced of the need for vitamins A and B in this regard; the former is found largely in cream, butter, egg yolks, green vegetables and liver, and the latter in whole grain cereals, milk, vegetables and fruits.

So the mother who would build a strong foundation for health during the growing period appreciates the need for all those foods that are rich in the different vitamins and mineral elements.

NEWS NOTES FROM THE FIELD

Physicians Licensed

Hartford, Sunderland, William A., Hartford Hospital
Hartford, Zariphes, Constantine A. P., Municipal Hospital
New Britain, Donnelly, Stephen P., 287 So. Main Street
New Britain, Paladino, Joseph S., New Britain General Hospital
New Haven, Sharp, Ezra A., New Haven Hospital
Stratford, Gledhill, Horace, Lordship Manor
Scafarello, Peter J., Lawrence General Hospital, Lawrence, Massachusetts
Carson, Robert J., Central Islip, Long Island, New York

Midwife Licensed

New Haven, Conte, Raffaela A., 90 Greene Street

Health Officers Appointed

New Haven County Health Officer, J. Frederick Baker, has announced the appointment of A. G. Garcia, M. D., of Waterbury as health officer of Middlebury succeeding Mrs. Rose Klitka.

Assistance in the Mississippi River Flood Area

The State Department of Health was directed by the Governor to answer the appeal of Senior Surgeon McMullen of the United States Public Health Service for aid in the flood section.

Accordingly its epidemiologist, Dr. Howard A. Lanpher, was released for relief duty, and, together with Professor Ira V. Hiscock of Yale School of Public Health departed on May first for Memphis, Tennessee, at which place they received orders to proceed and report to Dr. Garrison, State Health Officer at Little Rock, Arkansas. Connecticut contributed also 78,000 of typhoid and paratyphoid vaccine to be used to protect those people who are already meeting the menace of these dread diseases. Shipments were sent to the Mississippi and Louisiana State Boards of Health and the Medical Service headquarters of the American Red Cross at Memphis, Tennessee.

Connecticut Conference of Social Work

The 1927 conference which was held at Hartford April 24-27 was voted a distinct success. Five hundred were registered, a larger number than at any previous conference.

To call attention to the importance of health in any well rounded social service plan, the program contained two health

sessions. The first was a discussion of a Periodic Health Examination by Dr. Haven Emerson of Columbia University. Those who attended this meeting came away with the feeling that regular examinations from infancy to old age give the form of the health insurance that no individual nor group of individuals can afford to neglect.

At the second health session the growing importance of the cancer problem was presented by Dr. Herbert T. Lombard and Dr. Mary Lakeman of the Massachusetts Department of Public Health. Dr. Lombard outlined the cancer program now in operation by the Massachusetts State Department of Health as being one of research as to causes, early treatment for operative cases, and a wide educational policy which aims to protect against the disease and bring patients under observation at an earlier period.

Sanitary Engineering

On April 29, 1927, the Department approved the preliminary plans for the construction of a sewage siphon and a fine screening plant at Congress Street in Bridgeport. This will help to improve nuisance conditions near the present outlets. It is a step leading toward more comprehensive treatment of the city's sewage, which it is realized by the city is necessary to remedy the threatened pollution of bathing areas as well as to improve the general sanitation of the harbor.

Public Health Instruction

Many new films have been reviewed and the following ones secured for service in the state:

Malaria

Public Health Twins at Work (Social Hygiene)

Take No Chance (loaned by American Society for Control of Cancer

He Who Laughs Last (Health Examination)

Tuberculin Testing of Cattle (loaned by Commissioner on Domestic Animals)

Two new copies of New Ways for Old (Diphtheria)

Laboratories

SUMMARY OF BUREAU ACTIVITIES FOR APRIL, 1927

DIAGNOSTIC

	+	—	?	Unclassified	Total	
Typhoid	1	147	....	....	148	
Paratyphoid A	1	147	....	....	148	
Paratyphoid B	1	147	....	....	148	
Diphtheria	102	1,176	....	....	1,278	
Diphtheria Virulence	13	78	....	....	91	
Vincent's Angina	11	691	....	....	702	
Haemolytic Streptococci	44	655	....	....	699	
Tuberculosis	25	145	....	....	170	
Syphilis	361	2,003	110	....	2,474	
Gonorrhoea	22	83	....	....	105	
Rabies	6	5	....	....	11	
Special specimens	2	18	....	83	103	6,077

CHEMICAL AND BACTERIOLOGICAL

Milk samples	406	
Water samples	184	
Sewage samples	128	
Clinical thermometers	2,142	2,860
Total examinations made		8,937

NEGATIVE LABORATORY REPORTS

Many inquiries are received in regard to negative reports. A negative laboratory report means only that a particular specimen failed to show positive findings after careful search. It almost never rules out the disease condition suspected in the patient. Additional specimens should always be submitted if the clinical evidence so indicates.

The Laboratories are always at the disadvantage of basing the report on the examination of the specimen alone, while the physician has in addition the first-hand knowledge of the patient. When laboratory results are negative and clinical symptoms are not it is possible the specimen was taken too early in the disease and a later specimen might be positive; or it may mean that the infectious agent was absent at the moment the specimen was taken or present in too minute quantity to be demonstrable by laboratory methods.

One state laboratory uses as an axiom that a reliable laboratory report depends primarily upon care and thought in the collection and shipment of the specimen.

Vital Statistics

MONTH OF MARCH

TOTAL FOR FIRST THREE MONTHS OF THE YEAR 1927, 1926, 1925

	Births	Birth Rate*	Marriages	Mar. Rate*	Deaths	Death Rate*
1927	6,750	17.0±.1	1,891	4.8±.05	4,586	11.5±.1
1926	7,235	18.0±.1	1,924	4.9±.05	5,245	13.4±.1
1925	7,487	19.5±.1	2,205	5.7±.06	4,917	12.8±.1

*Rate on annual basis, per 1,000 population.

The figures given above show the accumulated totals for the first three months of the years discussed. In the analysis of them it must be remembered that they are subject to some change, owing to late reports.

The birth rate continues to be low, but not as low as the 16.3 of last month.

The marriage rate shows the effect of the Lenten season, and is somewhat lower than as published in the last bulletin.

The death record is very remarkable; 1927 is some 659 deaths below 1926. The deaths are being reduced at a time of the year when the effect will be greatest at the end of the year. The most dangerous mortality time is about over and the year is about to enter on the favorable months with a splendid start. In fact, it may result in the lowest mortality ever experienced in the state.

Births

The records show that the births of 2452 children were registered during March, precisely 12 more than the 2,440 reported in 1926. This is a meagre increase, which is so much offset by the estimated population increase that the rate is quite a little lower than a year ago. The rate this year is 18.5 and in 1926 it was 18.8. While these rates are very low, they are not as low as rates recorded in recent months, when rates of 16.0 have been encountered.

Twelve towns over 5,000 in population have recorded more births in 1927 than in 1926. These towns follow, a list to include only those towns with increases of 10 or more.

Ansonia	14± 7	Naugatuck	10± 6
East Hartford	18± 7	Stamford	22±13
Fairfield	14± 6	Stratford	19± 7
Hamden	12± 6	Torrington	10± 8
Manchester	12± 9	West Hartford	19± 7
Meriden	13±11	West Haven	14± 8

What are the characteristics of this list? In the first place some 7 of the increases are significant. The statistical meaning of the word "significant" is this: Something definite is responsible for the change under consideration. Whenever a value is about twice its standard deviation, the value is significant. Thus, the increase for Ansonia is 14 and has an associated standard deviation of 7. The value 14 is twice 7 and is therefore significant. Similarly, for East Hartford, Fairfield, Hamden, Stamford, Stratford and West Hartford, there appear increases which are of more than passing moment. Thus far the mathematics of the situation has lead us to the conclusion that something is causing these changes—furthermore, it is no chance phenomenon. The mathematical analysis will never tell us exactly what these causes are. Very often the precise cause is extremely difficult to discover. However, in the majority of the towns included in the list above, the explanation is simple. Since January 1927, the births of children have been counted statistically in the town of residence of the mother regardless of where the birth may have occured. This means, of course, that the smaller towns which lack hospital facilities will receive credit for those births being delivered in nearby larger towns. Strictly speaking, the figures for 1927 are not comparable with the records of 1926, but as the process of allocation of births and deaths is being followed with interest, the lists will be published as herein from month to month. They must be interpreted in the light of the new procedure. Next year we shall have a pair of comparable values for each town.

Stillbirths

During the month, 84 stillbirths were reported. This will bring a total of 2,536 living and stillbirths. These 84 stillbirths therefore occurred at the rate 33.1 ± 4.0 per 1,000 total births. In 1926, there were 96 stillbirths among 2,536 total births, by strange coincidence exactly the same total for each year. These stillbirths for 1926 occurred at a somewhat higher rate, 37.8 ± 4.0. However, this increase in rate is of no moment.

With reference to the sex ratio for 1927, it is of great interest to note that 42 were males and 42 females. This is rather unusual, for quite generally the sex ratio is to the male by a very decided amount. In 1926, there was a sex ratio of 126 for the month. It is to be regretted that at this time the sex distribution of the living births is not available. The suspicion lurks that the ratio of the sexes among the living births is approaching unity, that is to say, equality. As a

general principle it may be stated that the sex ratio of living births is 104 males to 100 females, or thereabouts. For still-births, the ratio may be as high as 145 to 100.

Deaths

The deaths are very astonishing for the month. There were 1,563 recorded. This statement means nothing until we discover that there has been a decrease of 488 below the figures for 1926. To clip off in one month nearly 500 deaths is indeed a most gratifyingly surprising mortality experience. The death rate is also low, being 11.8 on an annual basis. The month of March, it must be recalled, is considered to be a very unfavorable month—with the pneumonias and influenza in full swing. As mentioned above in the opening paragraphs of this article, the stage is being set to register the lowest rate ever recorded in the state when 1927 is closed. We must never forget what may happen—all statistical prophecy is very dangerous; but barring accidents the record for the year is apparently going to be a splendid one.

Where did this big reduction of 488 take place? Let us analyze the table below, which will for a few diseases show the record of 1927 with reference to 1926 and the increase or decrease experienced.

Cause of Death	1927	1926	Increase	Decrease
Disease of the heart	262±16	335±18	....	73±25
Epidemic Encephalitis	1± 1	1± 1	....	....
Pneumonia undefined	1± 1	4± 2	....	3± 2
Typhoid Fever	2± 1	3± 2	....	1± 2
Measles	5± 2	44± 7	....	39± 7
Scarlet Fever	5± 2	9± 3	....	4± 4
Whooping Cough	4± 2	20± 4	....	16± 5
Diphtheria	5± 2	10± 3	....	5± 4
Influenza	50± 7	150±12	....	100±14
Tuberculosis, pulmonary	91±10	111±11	....	20±14
Tuberculosis, other forms	11± 3	18± 4	....	7± 5
Cancer	153±12	137±12	16±17	....
Cerebrospinal Meningitis	0	2± 1	....	2± 1
Poliomyelitis	0	0	....	....
Lobar Pneumonia	86± 9	174±13	....	88±16
Broncho Pneumonia	82± 9	126±11	....	44±14
Diarrhoea & Enteritis under 2	10± 3	15± 4	....	5± 5
Puerperal Diseases	11± 3	33± 6	....	22± 7
Accident	72± 9	65± 8	7±12	....
Suicide	14± 4	21± 5	....	7± 6
Homicide	2± 1	7± 3	....	5± 3
Other causes	696±26	766±28	....	70±38
Totals	1,563±39	2,051±45	23	511

To start out at the very beginning of the list, there has been a decrease of 73 deaths due to heart diseases. This decrease cannot be due to a mere chance occurrence—it is

nearly three times its standard deviation of 25. The explanation is perhaps obscure. But it would be gratifying to believe that the effect of the periodic health examination is beginning to manifest itself. It is in this group perhaps more than in any other of the above list that the effect will appear when the value of these examinations is realized to the extent that all will have such a survey and a physiological accounting of their assets and liabilities.

The next disease to record a decrease of note is measles. This again is no chance reduction. It is due to the fact that last year measles was epidemic over the entire state and when such diseases are widespread in one year, it may quite confidently be expected that the next year will see a reduction. This is just what has happened with measles. There has also been a very decided reduction in whooping cough.

We read in the press that influenza has been epidemic in Europe. There was a wave of it in the United States last year. But this year there has been a tremendous reduction in this state. Actually, there were 100 less deaths from this cause, with an associated dispersion of 14. March is an influenza month. But we will never forget that influenza may rudely upset any idea that it is strictly a winter or late winter disease or respecter of season.

In association with influenza, very substantial reductions in both lobar and broncho pneumonia appear, somewhat more distinct for lobar than for broncho. Both, however, are reductions of extreme statistical significance.

There was also a very pronounced reduction in deaths due to puerperal diseases, possibly very intimately correlated with the reduction in influenza.

This will account for the major decreases. Of the increases, there is none of moment from the monthly point of view. If continued at the rate of 16 per month for cancer, however, there would be an increase of more than chance occurrence at the end of the year.

Of the accidental deaths, 16 were due to the automobile. In 1926, there were 13 such deaths.

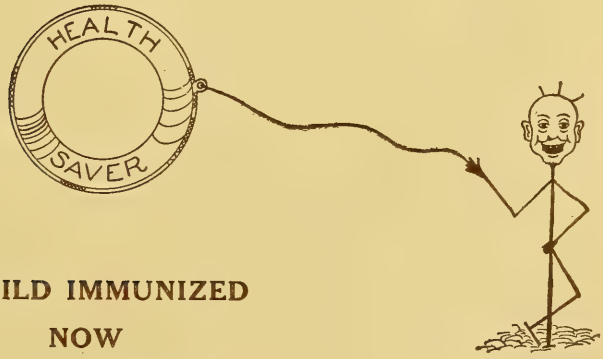
Marriages

The effect of Lent is shown as usual in the small number of marriages. However, there was a slight increase over last year. For a comparison of all births, marriages, deaths and infant mortality for the past six years, see the table below.

FOR SIX YEARS—MARCH, 1927

CONNECTICUT	1922	1923	1924	1925	1926	1927
BIRTHS	2773	2718	2805	2603	2440	2452
Birth Rate	22.9	22.1	22.4	20.4	18.8	18.5
DEATHS	1921	1959	1762	1723	2051	1563
Death Rate	15.9	15.9	14.1	13.5	15.8	11.8
MARRIAGES	428	490	678	508	413	457
Marriage Rate	3.5	4.0	5.4	4.0	3.2	3.5
COMMUNICABLE DIS.* DEATHS	345	367	178	216	349	162
Per Cent to Total Deaths	18.0	18.7	10.1	12.5	17.0	10.4
DEATHS UNDER 1 YEAR	269	260	230	215	223	164
Rate Per 1,000 Births	101.8	101.2	86.8	86.6	92.7	68.6

*Includes Typhoid Fever, Measles, Scarlet Fever, Whooping Cough, Diphtheria, Tuberculosis Pulmonary, Cerebrospinal Meningitis, Poliomyelitis, Influenza.



A CHILD IMMUNIZED
NOW
AGAINST DIPHTHERIA
WILL BE PROTECTED
DURING NEXT WINTER

Statistics March, 1927

	Population Est. as of July 1, 1927 Based on U. S. Census	TOTALS				DEATH RATES			AGE GROUPS		
		Births	Stillbirths	Marriages	Deaths	All Causes (per 1,000 population)	Tuberculosis (per 1,000 population)	Children under 1 year (per 1,000 births)	Under 1 year	1 to 5 years	65 years and over
State of Connecticut	1,586,435	2452	84	457	1563	11.8	0.7	68.6	164	53	615
Ansonia	19,548	37	.....	3	18	11.0	1.8	126.3	2	1	3
Branford	7,073	5	.....	2	5	8.5	.....	122.4	1	.....	3
Bridgeport	174,890	251	17	49	151	10.4	0.7	31.4	8	9	46
Bristol	26,087	54	2	7	27	12.4	0.5	106.7	6	4	11
Danbury	21,931	32	1	9	30	16.4	0.5	68.7	3	1	15
Derby	12,963	18	1	2	7	6.5	.....	29.1	1	.....	4
East Hartford	14,311	31	.....	3	18	15.1	0.8	87.6	1	.....	9
Enfield	13,241	10	.....	6	8	7.2	.....	146.3	3	1	1
Fairfield	15,541	26	.....	.....	9	6.9	.....	89.5	1	.....	3
Glastonbury	6,206	9	.....	1	5	9.7	1.9	.....	.....	.....	3
Greenwich	26,373	39	1	35	23	10.5	.....	.....	.....	2	9
Groton	11,326	16	.....	1	12	12.7	.....	.....	.....	.....	10
Hamden	10,718	24	.....	3	23	25.8	1.1	.....	.....	.....	11
Hartford	168,258	271	16	60	161	11.5	0.6	52.2	18	6	57
Killingly	9,384	18	1	2	11	14.0	.....	68.9	1	.....	5
Manchester	21,992	44	.....	3	14	7.6	.....	.....	.....	1	8
Meriden	36,807	68	3	8	34	11.1	0.6	85.7	5	.....	12
Middletown	22,932	24	1	6	14	7.3	1.0	83.5	4	.....	4
Milford	14,673	13	.....	2	16	13.1	.....	.....	.....	1	6
Naugatuck	16,829	20	.....	4	14	10.0	1.4	200.0	2	.....	5
New Britain	71,068	129	5	15	51	8.7	1.1	99.8	13	.....	11
New Haven	184,727	291	12	68	182	11.8	0.8	74.5	23	7	65
New London	30,149	37	1	12	45	17.9	0.4	90.6	6	1	13
Norwalk	30,173	50	3	7	26	10.3	0.4	37.6	2	1	11
Norwich	30,689	58	1	7	32	12.5	0.3	48.2	3	2	17
Plainfield	8,818	1	.....	2	10	13.6	1.4	187.5	2	.....	3
Plainville	5,064	8	.....	.....	7	16.6	.....	.....	.....	1	3
Plymouth	6,459	5	.....	.....	2	3.7	.....	.....	.....	.....	1
Putnam	9,220	13	.....	4	6	7.8	.....	133.3	2	.....	1
Seymour	8,321	10	.....	1	9	13.0	.....	136.3	1	.....	1
Shelton	11,699	14	.....	2	8	8.2	.....	85.1	1	.....	1
Southington	9,925	15	.....	.....	13	15.7	1.2	139.5	2	1	4
Stafford	5,472	5	.....	6	3	6.6	.....	.....	.....	.....	1
Stamford	48,515	99	3	22	52	12.9	0.5	64.6	6	1	19
Stonington	11,041	12	.....	9	12	13.0	1.1	283.4	3	.....	5
Stratford	17,451	31	.....	1	14	9.6	1.4	70.2	1	2	2
Thompson	5,226	13	.....	2	6	13.8	.....	.....	.....	.....	1
Torrington	25,316	35	1	2	25	11.9	0.5	24.8	1	2	7
Vernon	8,751	15	.....	1	9	12.3	1.4	.....	.....	.....	6
Wallingford	12,659	16	.....	2	12	11.4	.....	244.8	2	.....	8
Waterbury	105,960	165	6	19	87	9.8	0.2	69.9	13	3	26
Watertown	7,506	15	.....	1	9	14.4	.....	307.7	2	.....	4
West Hartford	11,908	34	.....	6	18	18.1	2.0	213.0	3	1	7
West Haven	18,834	36	2	2	29	18.5	2.5	97.8	3	.....	12
Westport	5,772	5	1	1	7	14.6	.....	255.3	1	.....	3
Wethersfield	5,264	9	.....	3	3	6.8	.....	.....	.....	.....	2
Winchester	9,104	8	.....	1	11	14.5	1.3	.....	.....	.....	8
Windham	14,418	.....	.....	.....	12	10.0	1.7	.....	.....	.....	6
Windsor	6,732	6	.....	2	4	7.1	.....	210.5	1	.....	2
Towns under 5,000	209,106	279	6	53	239	13.7	0.8	66.9	17	5	128
Other States	.....	28	.....	.....	20	.....	.....	.....	.....	.....	12

DEATHS FROM IMPORTANT CAUSES

Diseases of the Heart	Encephalitis Epidemic	Pneumonia Undefined	Typhoid Fever	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Influenza	Tuberculosis-Pulmonary	Tuberculosis Other forms	Cancer	Meningitis-Cerebrospinal	Poliomyelitis	Pneumonia—Lobar	Pneumonia—Broncho	Diarrhoea-Enteritis Under 2	Puerperal Diseases	Accident	Suicide	Homicide	Institutional Deaths	Non-resident Deaths
262	1	1	2	5	5	4	5	50	91	11	153	.....	.....	86	82	10	11	72	14	2	592	.....
3	.....	.....	.....	.....	.....	.....	.....	1	3	.....	.....	.....	.....	2	.....	1	1	.....	.....	.....	4	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
24	.....	.....	.....	.....	.....	.....	3	4	10	2	19	.....	.....	6	7	.....	2	6	2	.....	64	.....
1	.....	1	.....	3	1	1	.....	.....	1	.....	1	.....	.....	3	.....	.....	.....	1	.....	.....	10	.....
3	.....	.....	.....	.....	.....	.....	.....	.....	1	1	6	.....	.....	2	2	.....	.....	2	.....	.....	17	.....
1	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....	2	.....	.....	2	.....
3	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	2	.....	.....	3	2	.....	.....	.....	.....	.....	7	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	1	1	.....	2	.....	.....	.....	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....	.....	.....	1	.....	.....	1	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	2	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
1	.....	.....	.....	.....	.....	.....	.....	2	.....	1	5	.....	.....	2	2	.....	.....	1	.....	.....	5	.....
5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
5	.....	.....	1	.....	.....	.....	.....	.....	1	.....	2	.....	.....	3	.....	.....	.....	.....	1	.....	6	.....
31	.....	.....	.....	.....	.....	.....	.....	4	9	.....	11	.....	.....	8	10	.....	1	6	1	.....	70	.....
1	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	1	.....	.....	1	.....	.....	.....	.....	.....	.....	3	.....
6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	5	.....
3	.....	.....	.....	.....	.....	.....	.....	2	2	.....	5	.....	.....	2	5	.....	.....	.....	.....	.....	15	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	1	.....	.....	1	1	.....	.....	.....	.....	.....	6	.....
3	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	2	.....	.....	2	2	.....	.....	1	.....	.....	5	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	3	.....	.....	1	.....	.....	.....	.....	.....	.....	4	.....
5	.....	.....	.....	.....	.....	.....	.....	.....	7	.....	7	.....	.....	3	4	2	.....	2	.....	1	22	.....
31	.....	.....	.....	.....	.....	.....	1	9	12	2	16	.....	.....	11	10	.....	1	6	1	.....	92	.....
9	.....	.....	.....	.....	.....	.....	.....	2	1	2	5	.....	.....	1	3	1	.....	.....	1	.....	17	.....
5	.....	.....	.....	.....	.....	1	1	3	3	.....	1	.....	.....	2	1	.....	.....	1	.....	.....	9	.....
8	.....	.....	.....	.....	.....	.....	.....	1	1	.....	3	.....	.....	.....	.....	.....	.....	2	.....	.....	14	.....
2	.....	.....	.....	2	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	3	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	2	.....	.....	.....	.....	.....	2	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	3	1	.....	.....	.....	1	.....	3	.....
1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....
1	.....	.....	.....	.....	.....	.....	.....	1	1	.....	3	.....	.....	1	1	.....	1	.....	.....	.....	7	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....
9	.....	.....	.....	.....	.....	.....	.....	2	2	.....	6	.....	.....	3	2	1	.....	5	.....	.....	20	.....
1	.....	.....	.....	.....	1	.....	.....	.....	1	.....	1	.....	.....	.....	1	.....	.....	.....	.....	.....	2	.....
2	.....	.....	.....	.....	.....	1	.....	1	2	.....	2	.....	.....	.....	1	.....	1	1	.....	.....	8	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....
3	.....	.....	.....	.....	.....	.....	.....	1	1	.....	2	.....	.....	3	2	.....	.....	2	.....	.....	7	.....
2	.....	.....	.....	.....	1	.....	.....	.....	1	.....	.....	.....	.....	.....	1	.....	.....	1	.....	.....	3	.....
.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....	2	.....	.....	2	.....	.....	.....	.....	.....	.....	7	.....
12	.....	.....	.....	.....	.....	.....	.....	2	2	.....	8	.....	.....	5	6	1	2	3	1	.....	29	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	1	.....	.....	1	.....	.....	4	.....
6	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	1	.....	.....	.....	2	.....	.....	3	.....	.....	9	.....
4	.....	.....	.....	.....	.....	.....	.....	.....	4	.....	3	.....	.....	2	.....	.....	.....	.....	1	.....	12	.....
.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1	.....	.....	3	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....
6	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	3	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	1	.....	.....	2	1	.....	.....	.....	.....	.....	2	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
45	.....	.....	1	.....	.....	1	.....	8	14	3	17	.....	.....	8	10	1	2	15	4	.....	69	.....
6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	1	.....	.....	2	.....	.....	13	.....

Preventable Diseases

INCIDENCE OF DISEASE FOR MONTH OF APRIL, 1927

(As compared with previous years)

A comparison of the daily morbidity reports received during the month of April, 1927, with the corresponding month for the years 1922, 1923, 1924, 1925 and 1926.

DISEASE	Average 1922-1926 for April	Mean 1922-1926 for April	1922	1923	1924	1925	1926	1927
Cerebrospinal Meningitis ..	5	5	11	5	2	4	5	3
Diphtheria	149	154	212	178	154	138	65	115
Encephalitis Epidemic	7	10	10	14	3	4	2	4
Measles	730	909	909	1,002	632	779	2,426	326
Poliomyelitis	1	3	....	....	3	3	1	2
Scarlet Fever	426	391	252	290	719	480	391	424
Smallpox	19	74	74	11	10	3	....	....
Typhoid Fever	7	7	12	7	3	10	4	2
Tuberculosis Pulmonary ..	138	141	138	141	142	149	128	120
Whooping Cough	235	266	124	276	107	400	265	120

A comparison of the morbidity on these diseases for the two preceding months, February and March with the April record is as follows:

	February	March	April
Cerebrospinal Meningitis	5	1	3
Diphtheria	128	123	115
Encephalitis Epidemic	6	....	4
Measles	408	600	326
Poliomyelitis	1	1	2
Scarlet Fever	437	538	424
Smallpox	....	....	....
Typhoid Fever	4	2	2
Tuberculosis Pulmonary	116	122	120
Whooping Cough	179	220	120

Cases of Other Reportable Diseases

Anthrax	1	Mumps	167
Chickenpox	285	Paratyphoid Fever	2
Conjunctivitis Infectious	8	Septic Sore Throat	11
Encephalitis Epidemic	4	Tetanus	1
German Measles	57	Gonorrhoea	97
Influenza	21	Syphilis	89
Malaria	1		
		Total	744

Cases of Occupational Diseases

Anthrax	1	Rose Wood Sawdust	1
Dermatitis and Eczema	4	Toxic Conjunctivitis, from Fulminate of Mercury	2
Toxic Dermatitis, from Fulminate of Mercury	43		
Toxic Conjunctivitis, from		Total	51

Cases of Certain Reportable Diseases

April, 1927	Population Est. as of July 1, 1927	Typhoid Fever	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Meningitis Cerebrospinal	Poliomyelitis	Pulmonary Tuberculosis	Other Forms Tuberculosis	Pneumonia Lobar	Broncho-Pneumonia	Other Com. Diseases
State Total	**1,586,435**	**2**	**326**	**424**	**120**	**115**	**3**	**2**	**120**	**17**	**208**	**143**	**744**
NEW HAVEN CO.	**475,419**	**1**	**35**	**80**	**21**	**24**			**37**	**7**	**41**	**34**	**198**
New Haven	184,727		13	12	6	6			16	4	12	9	100
Waterbury	105,960		6	18	1	4			8	1	8	9	16
Meriden (city and town)	36,807		1	8	5	4			5		8	6	27
Ansonia	19,548	1		2		3			1		1	3	8
West Haven	18,834		1	2		1				1	2	3	4
Naugatuck	16,829					4			1				1
Wallingford (town and boro)	12,659		1	3							1		1
Milford	14,673			5	8						1		15
Derby	12,963			1		1			1		1		
Hamden	10,718		12	9	1	1			1		4		15
Branford (town and boro)	7,073		1	10							2	2	
Seymour	8,321			1					1				1
Towns under 5,000	26,307			9					3	1	1	2	10
FAIRFIELD CO.	**379,505**		**59**	**145**	**17**	**43**			**24**	**3**	**52**	**18**	**220**
Bridgeport	174,890		43	55		25			19	3	33	12	38
Stamford (city and town)	48,515		2	21	2	6			1		3	2	33
Norwalk	30,173		5	17		4					2	2	23
Danbury (city and town)	21,921		1	1					2		3		15
Greenwich (town and boro)	26,373		1	20	11	1			1		2	2	42
Stratford	17,451		1	4		2					2		1
Fairfield	15,541			8									
Shelton	11,699			1		1					1		2
Westport	5,772			5	1				1				4
Towns under 5,000	27,160		6	13	3	4					6		62
HARTFORD CO.	**402,344**		**190**	**105**	**47**	**29**		**2**	**27**	**6**	**84**	**70**	**185**
Hartford	168,258		6	41	17	10			17	3	46	38	110
New Britain	71,068		4	28	1	3			4	1	8	11	14
Bristol (city and town)	26,087		174	12	16	5			1	1	7	5	6
Manchester	21,992			1		6					2	3	11
Enfield	13,241					1		2	1		1	1	12
East Hartford	14,311		2	3	4	2					1	3	3
Southington (town and boro)	9,925		1		1	2					4		1
West Hartford	11,908			5						1	2	2	10
Windsor	6,732			1					2		2	1	
Glastonbury	6,206											1	1
Wethersfield	5,264				1				1		1		4
Plainville	5,064			1							3	1	
Towns under 5,000	42,288		3	13	7				1		7	4	13
NEW LONDON CO.	**114,930**	**1**	**3**	**57**	**7**	**10**	**2**		**21**	**1**	**13**	**8**	**61**
Norwich (city and town)	30,689	1		36		3	1		4		2	2	7
New London	30,149			10		3			8	1		2	24
Stonington (town and boro)	11,041												
Groton (town and boro)	11,326			3		1					5		13
Towns under 5,000	31,725		3	8	7	3	1		9		6	4	17
LITCHFIELD CO.	**80,900**		**2**	**2**	**10**	**6**			**3**		**2**	**7**	**27**
Torrington (town and boro)	25,316								1				
Winchester (inc. Winsted)	9,109					1							
Plymouth	6,459		2		5	3					1	1	
Watertown	7,506												1
Towns under 5,000	32,510			2	5	2			2		1	6	26
WINDHAM CO.	**56,258**		**35**	**21**	**8**		**1**		**3**		**11**	**2**	**5**
Windham (inc. Willimantic)	14,418			4					1				
Putnam (city and town)	9,220			5			1		1		3		
Plainfield	8,818		16	4	1								
Killingly (inc. Danielson)	5,226			6							1		2
Thompson	9,384			1	2				1		4		1
Towns under 5,000	9,192		19	1	5						3	2	2
MIDDLESEX CO.	**49,279**			**7**	**5**				**4**		**5**	**3**	**40**
Middletown (city and town)	22,032				5				1		2		13
Middletown State Hospital									1				4
Towns under 5,000	26,347			7					2		3	3	23
TOLLAND CO.	**27,800**		**2**	**7**	**5**	**3**			**1**			**1**	**8**
Vernon (inc. Rockville)	8,751			1					1				
Stafford (town and boro)	5,472		1		1	1							1
Towns under 5,000	13,577		1	6	4	2						1	7

"A Word to the Wise - - -"

Before Vacationing

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State of Connecticut
Health Bulletin

"For a Clean State and a Healthy People"

Vol. 41 June, 1927 No. 6

1927
PUBLIC HEALTH
LEGISLATION

(Turn page for Index)

STANLEY H. OSBORN, M. D., C. P. H., Commissioner

ISSUED BY
State Department of Health
HARTFORD

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This Issue Contains 1927 Health Laws

State Aid to Towns for Public Health Nursing
Registration of Stillborn Children
Regulations Concerning Tetraethyl Lead
Establishing Areas Free from Bovine Tuberculosis
Licensing Certain Hospitals
Amending Act for Inspection of Dairies
Amending Act Concerning Towels in Public Places
Pollution of Waterways by Garbage and Refuse
Bottling Water and Manufacturing Beverages
Amending Act Concerning Marriage Licenses
Amending Act for Disinterment Permits
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List of Other Acts Pertaining to Public Health
News Notes From the Field
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Incidence of Preventable Diseases for May, 1927

CONNECTICUT

HEALTH BULLETIN

Vol. 41 June, 1927 No. 6

Issued Monthly by the

STATE DEPARTMENT OF HEALTH

SUBSTITUTE FOR HOUSE BILL NO. 114.

CHAPTER 298

AN ACT CONCERNING STATE AID TO TOWNS FOR PUBLIC HEALTH NURSING.

Be it enacted by the Senate and House of Representatives in General Assembly convened:

Section 1. On or before August first in each year, the treasurer of each town, consolidated town and city, and consolidated town and borough, shall return to the tax commissioner a statement, under oath, of the amount received as taxes laid upon the property valued in the grand list of such municipality, including the amount received from personal taxes, taxes on shares of stock in any bank, trust or insurance company received from the state, with the amount received from taxes by any city, borough, fire district, municipal association or school district within such municipality, including also the amount which would have been received from all property exempted from taxation under the provisions of any special act or by town vote, as provided by sections 1161 and 1162 of the general statutes, for each of the three fiscal years next preceding the previous July. As long as there shall be a state tax, the reports filed with the tax commissioner under the provisions of section 1225 of the general statutes shall be used in lieu of the reports required by this section. On or before October 1, 1927, and on or before October first of each year thereafter, the tax commissioner shall certify to the commissioner of health the names and the amounts of all towns whose average receipts so reported for such three years shall not be in excess of fifty thousand dollars.

Sec. 2. Towns having average receipts of not over fifty thousand dollars for the three fiscal years preceding, as determined in section one of this act, shall be divided into nine classes as follows: First class, towns having average receipts so determined of not more than ten thousand dollars; second class, towns having average receipts of over ten thousand dollars but not in excess of fifteen thousand dollars; third class, towns having average receipts of more than fifteen thousand dollars but not in excess of twenty thousand dollars; fourth class, towns having average receipts of more than twenty thousand dollars but not in excess of twenty-five thousand dollars; fifth class, towns having average receipts of more than twenty-five thousand dollars but not in excess of thirty thousand dollars; sixth class, towns having average receipts of more than thirty thousand dollars but not in excess of thirty-five thousand

dollars; seventh class, towns having average receipts of more than thirty-five thousand dollars but not in excess of forty thousand dollars; eighth class, towns having average receipts of more than forty thousand dollars but not in excess of forty-five thousand dollars; ninth class, towns having average receipts of more than forty-five thousand dollars but not in excess of fifty thousand dollars.

Sec. 3. Each such town may apply to the state department of health, as provided in section four of this act, for aid in establishing a public health nursing service for providing visiting nurses under the authorization of chapter 284 of the public acts of 1923. No town entitled to aid under the provisions of this act shall receive more than its proportionate share of state reimbursement on the cost of the service for one nurse, provided, if two or more towns entitled to such aid shall unite to employ jointly one nurse, each such town so uniting shall be entitled to reimbursement from the state of such percentage of its share in the payment of the cost of the service as is provided by this act. Towns in the first class shall receive, as reimbursement from the state, seventy-five per centum of such cost; towns in the second class shall receive seventy per centum; towns in the third class shall receive sixty-five per centum; towns in the fourth class shall receive sixty per centum; towns in the fifth class shall receive fifty per centum; towns in the sixth class shall receive forty per centum; towns in the seventh class shall receive thirty per centum; towns in the eighth class shall receive twenty per centum; towns in the ninth class shall receive ten per centum.

Sec. 4. Any such town, through its health officer or board of health, may submit a public health nursing program, except public school nursing, and make application to the state department of health for the approval of the program submitted. Upon approval of said public health nursing program by the state department of health, and until such time as said approval may be withdrawn, such town shall be entitled to aid as provided by this act.

Sec. 5. Each town, after the approval of its public health nursing program, shall certify to the state department of health, on or before the fifteenth days of January, April, July and October, the cost of such service as shall have been maintained, during the three months ending on the last days of the months next preceding such dates, respectively, under the public health nursing program approved as provided in section four hereof. The proportion of such cost for which such town may be entitled to be reimbursed shall be paid to such town after approval by the state department of health.

Sec. 6. No public health nurse shall be employed by any town receiving aid under this act until her qualifications for such work shall have been approved and certified in a manner to be determined by the state department of health.

Sec. 7. The local health officer or the local board of health shall administer the public health nursing service, except public school nursing, but such health officer or board of health may appoint some person or group of persons to administer such public health nursing service.

Sec. 8. The sum of thirty thousand dollars is appropriated for the purpose of carrying out the provisions of this act.

Substitute for House Bill No. 381.

CHAPTER 9

AN ACT CONCERNING THE REGISTRATION OF STILLBORN CHILDREN.

Be it enacted by the Senate and House of Representatives in General Assembly convened:

Section 1. A stillborn child shall be registered as a still birth and a still birth certificate shall be filed with the registrar of vital statistics in the manner required by statute for the filing of a birth certificate.

Sec. 2. For the purposes of this act, a foetus born after a known period of gestation of not less than twenty-eight weeks or measuring at least thirteen and eight-tenths inches from the crown of the head to the sole of the heel, the body being fully extended, in which foetus there is no attempt at respiration, no action of heart and no movement of voluntary muscle, shall be recorded as a still birth.

Sec. 3. Any person violating any provision of this act shall be subject to the penalties of section 338 of the general statutes.

Substitute for House Bill No. 116.

CHAPTER 6

AN ACT PROVIDING FOR REGULATIONS CONCERNING TETRAETHYL LEAD

Be it enacted by the Senate and House of Representatives in General Assembly convened:

The state department of health is directed to include in the sanitary code regulations concerning tetraethyl lead.

Surstitute for Senate Bill No. 159.

CHAPTER 188

AN ACT PROVIDING FOR THE ESTABLISHMENT OF AREAS FREE FROM BOVINE TUBERCULOSIS.

Be it enacted by the Senate and House of Representatives in General Assembly convened:

Section 1. The commissioner on domestic animals shall establish circumscribed areas, as hereinafter provided,. within which all neat cattle shall be subjected to tuberculin test. Upon petition of the owners of eighty-five per centum of the cattle in any such area that have been placed under federal and state supervision for the eradication of tuberculosis and the finding, after investigation, that the facts stated therein are substantially true, or, upon the establishing by the commissioner of the fact that the owners of eighty-five per centum of such cattle within any such area have signed the application and agreement provided for in chapter 262 of the public acts of 1925, upon comparing a certificate,

which shall be signed by the town clerk, of the enumeration of cattle, as set forth on the last-completed grand list or lists of the town or towns either in whole or in part within such area, with the records of tuberculin-tested cattle in the office of the commissioner, the commissioner shall, if sufficient funds shall be available for such purpose, establish such area, which he shall fully bound and describe, as an area within which bovine tuberculosis shall be eradicated at federal and state expense as provided by statute, and shall cause all neat cattle within such area to be tested, quarantined, appraised and condemned as provided by statute. The commissioner shall cause the establishing of such area and the proceedings to be taken therein, as herein provided, to be advertised in some newspaper having a circulation in the town or towns included in such area and a notice thereof to be posted on a public signpost in each town wholly or in part within such area, not less than ten nor more than thirty days before such proceedings shall be begun.

Sec. 2. No cattle shall be brought or transported into such area, after the same shall have been established, except in compliance with the provisions of section ten of chapter 262 of the public acts of 1925, and except cattle being transported through such area on the highways by truck or railroad.

Sec. 3. Not later than six months from the date of establishing any such area, the commissioner shall test all remaining untested cattle therein under the statutory provisions therefor.

Sec. 4. After the testing of all such neat cattle within each such area shall have been completed as herein provided, such area shall be kept free from bovine tuberculosis at federal and state expense by the tuberculin-testing of all cattle therein at least once per year under the statutory provisions therefor.

Sec. 5. Any person or any officer or agent of any corporation who shall violate any provision of section two hereof shall be fined not more than one hundred dollars or imprisoned not more than thirty days or both for each such violation and the transportation of each such animal into such area contrary to the provisions of said section shall constitute a separate violation.

Sec. 6. This act shall take effect from its passage.

House Bill No. 379.

CHAPTER 178

AN ACT CONCERNING THE LICENSING OF CERTAIN HOSPITALS.

Be it enacted by the Senate and House of Representatives in General Assembly convened:

Section 1. No person, firm or corporation shall operate a hospital for the care of the sick, unless such person, firm or corporation shall have obtained a license therefor from the state department of health.

Sec. 2. For the purpose of this act, a hospital is defined as an institution for the lodging, care and treatment of persons suffering from disease or other abnormal physical conditions.

Sec. 3. The state department of health shall, in its sanitary code, define the minimum requirements for a hospital. The state department of health, after receiving an application in writing, and making such investigations as shall be deemed necessary, and finding the specified requirements to have been fulfilled, shall grant a license to operate a

hospital. Such license shall terminate on December thirty-first of each year, and may be revoked by the state department of health, after hearing, for failure by the holder thereof to carry out the requirements established by law.

Sec. 4. The provisions of this act shall not apply to any hospital or institution wholly or partially supported by the state, or to any institution coming under the provisions of section 1695, section 3023 or section 2647 of the general statutes.

Sec. 5. Any person or any officer or agent of a corporation who shall violate any provision of this act shall be fined not more than one thousand dollars or imprisoned not more than six months or both.

Substitute for House Bill No. 592.

CHAPTER 232

AN ACT AMENDING AN ACT CONCERNING THE INSPECTION OF DAIRIES AND THE PRODUCTION AND MARKETING OF MILK AND CREAM.

Be it enacted by the Senate and House of Representatives in General Assembly convened:

Section 1. Section eleven of chapter 225 of the public acts of 1925 is amended to read as follows: A milk house or room shall be provided in any dairy where milk is being produced, handled or sold, and such house or room shall be used exclusively for the care, cooling, handling and storing of milk or products thereof, and shall have a smooth, concrete floor, graded, drained and trapped, so that the water will not stand on the floor. The space occupied by windows shall equal at least ten per centum of the floor area. All windows, doors or other openings shall be effectually screened during the fly season. If a steam boiler shall be used, a suitable ventilator shall be provided in the ceiling to carry off the steam. Milk plants in which milk is being prepared for retail trade shall be equipped with suitable facilities for washing and sterilizing bottles, cans and other equipment and shall have an adequate supply of hot and cold water and if a steam boiler and sterilizer shall not be used, a chemical solution approved by the dairy and food commissioner, shall be used for sterilizing purposes.

Sec. 2. Section fifteen of said chapter is amended to read as follows: No person shall bottle, pour, dip or measure any milk, cream, skim milk or buttermilk for sale at retail in any vehicle upon any street, or in any other place than a milk room or place approved by the dairy and food commissioner. Milk, when served by any hotel, restaurant, lunchroom, fountain or other place of public entertainment, shall be served in the original bottle, the cap of which shall not be removed except in the presence of the consumer or patron, but this provision shall not apply to cream so served or to mixed beverages of which milk forms a part.

Sec. 3. Section sixteen of said chapter is amended to read as follows: No person, firm or corporation shall engage in the process known as "Pasteurization of milk or cream" for public sale until a permit shall have been issued by the dairy and food commissioner. Such permit shall be issued for a period ending December thirty-first of each year, and may be suspended or revoked at any time for cause by the dairy and food commissioner. During pasteurization a competent person shall be in charge who shall have passed an examination satisfactory to the dairy and food commissioner and shall hold a certificate to pasteurize milk, which certificate

shall be valid until revoked. No milk or cream shall be sold in this state as "pasteurized" milk or cream unless produced in accordance with the provisions hereinafter specified.

Sec. 4. Section twenty of said chapter is amended to read as follows: Each pasteurizing plant, except such plants as shall use the single "batch" system, shall be equipped with an automatic controller and an automatic recording thermometer, which shall regulate and register on a chart the temperature of the milk or cream as it shall be pasteurized. The recording thermometer shall be tested at least twice each week by a certified operator, and an accurate record of the findings shall be kept in such a manner as the dairy and food commissioner may require, showing the date when the thermometers were tested. Each plant shall be equipped with a certified thermometer for checking the accuracy of recording thermometers, and such thermometer shall be certified as to its accuracy before using by the Connecticut Agricultural Experiment Station, at New Haven. An automatic controller and a duplicate automatic recording thermometer shall be kept in reserve in good repair at all times. Plants pasteurizing with the "batch" system, with one tank, shall be equipped with an automatic recording thermometer which shall register on a chart the temperature of the milk or cream as it shall be pasteurized, and a duplicate automatic recording thermometer shall be kept in reserve in good repair at all times. Each chart for recording shall be certified to by the dairy and food commissioner before being used, while in use shall be kept in a locked chamber and after use shall be preserved for at least six months, subject to inspection by the dairy and food commissioner.

Substitute for Senate Bill No. 247.

CHAPTER 154

AN ACT AMENDING AN ACT CONCERNING THE USE OF TOWELS IN HOTELS AND PUBLIC LAVATORIES.

Be it enacted by the Senate and House of Representatives in General Assembly convened:

Section 2675 of the general statutes is amended to read as follows: All towels provided by any hotel, for the use of guests therein, or by any public lavatory shall be individual towels, or towelling may be provided so arranged in locked cabinets that each user may pull out a clean portion and the used portion shall be automatically drawn into a separate compartment and mechanically locked to prevent withdrawal for re-use. Any such towels or towelling which shall have been used and discarded by an individual shall not be used again until thoroughly washed and dried. Each guest occupying a room in any hotel shall be furnished with such towels in such room; and, in the public washroom, if any, in such hotel, there shall be kept at all times, in sight of, and easy of access to guests, a sufficient supply of individual towels or towelling so arranged in locked cabinets that each user may pull out a clean portion and the used portion shall be automatically drawn into a separate compartment and mechanically locked to prevent withdrawal for re-use. The owner, manager, agent or person in charge of any hotel or public lavatory who shall fail to comply with any of the provisions hereof shall be fined not less than ten nor more than one hundred dollars for each offense.

SUBSTITUTE FOR SENATE BILL NO. 373.

CHAPTER 315

AN ACT CONCERNING THE POLLUTION OF WATERWAYS BY GARBAGE AND REFUSE.

Be it enacted by the Senate and House of Representatives in General Assembly convened:

Section 1. No person or municipal or private corporation, shall deposit any garbage, domestic refuse or other material of like nature, in the waters of any river, stream, pond, lake or tidal waters of this state or shall establish or maintain or cause the use of any place for the disposal of any such material on any land within a distance of fifty feet of the high water mark of any such waters or in any place where storm or high water may carry such material to an adjacent waterway. The state water commission, upon the written application of the owner of any such land, containing such information as the commission may require, shall, if satisfied that such deposit will not cause the pollution of any adjacent waters, issue a permit under such conditions as it may specify, authorizing such deposit.

Sec. 2. Any person who shall violate any provision of this act shall be fined not more than two hundred dollars.

SUBSTITUTE FOR SENATE BILL NO. 526.

CHAPTER 263

AN ACT CONCERNING THE BOTTLING OF WATER AND THE MANUFACTURE AND BOTTLING OF CARBONATED BEVERAGES.

Be it enacted by the Senate and House of Representatives in General Assembly convened:

Section 1. Section two of chapter 102 of the public acts of 1925 is amended to read as follows: A fee of twenty dollars shall accompany each application for the license provided for in said chapter 102. Each such license shall expire on the thirtieth day of June next following the issuance thereof. Such license shall be in such form as the commissioner shall determine and shall be kept exposed to view in a conspicuous place upon the premises where such business shall be conducted or carried on. All fees received for such licenses shall be paid by the commissioner to the state treasurer and shall be added to the regular appropriation for the expense of the dairy and food commissioner. No person, firm or corporation shall sell or offer for sale within the state any beverages manufactured or bottled beyond the boundaries of the state unless such person, firm or corporation shall have made application for and secured a license from the dairy and food commissioner upon the payment of twenty dollars, and no such license shall be issued by the dairy and food commissioner until such establishment shall have been inspected by him or his agent, or until such establishment shall have furnished said commissioner a certificate from the commission having the enforcement of the beverage law in the state where such establishment is located that such establishment complies in every respect with the requirements of the Connecticut beverage law.

Sec. 2. Section three of said chapter is amended to read as follows: The establishment used for the preparation, manufacture and bottling of any beverage shall be adequately lighted and ventilated and all floors shall

be constructed of cement, concrete or tile laid in cement, or other material impervious to water, and shall have sufficient pitch to insure drainage; walls and ceilings shall be varnished or painted in light color and kept clean; doors, windows and other openings of any room in which beverages or the ingredients of such beverages shall be prepared shall be screened and all entrances and exits shall be equipped with automatic closing devices, and each room in such establishment shall have at least one device for the catching of flies. Wash basins, sinks and toilets shall be provided for employees and no toilet shall open directly into any room used for the preparation or bottling of any beverage. Each such establishment shall be equipped with adequate and efficient machinery for the soaking, automatic cleaning and sterilizing of all bottles in which any such beverage or water shall be placed for the purpose of sale. The term "beverage" as used herein shall include all waters, soft drinks and like products, whether simple, mixed or compounded.

Sec. 3. No person, firm or corporation shall sell, offer for sale or give away within the state any beverage in bottles or other containers unless each of such bottles or containers shall have blown into it, etched or engraved, or otherwise indicated thereon, the name of the person, firm or corporation manfacturing or bottling such beverage or the name of the registered trade mark of such beverage. The filling or refilling of any glass, jar, bottle or other container, with beverages, water, mineral water or any other drink or fluid, with intent to sell or vend such water, beverage or fluid, which bears the label of any other person, firm or corporation or which has blown into it the name or trade mark of any person, firm or corporation, without the consent of such person, firm or corporation, shall constitute misbranding in violation of the provisions of section 2439 of the general statute. Any person who shall violate any provision of this section shall be subject to the penalties provided in section ten of said chapter 102.

Substitute for House Bill No. 194.

CHAPTER 40

AN ACT AMENDING AN ACT CONCERNING MARRIAGE LICENSES.

Be it enacted by the Senate and House of Representatives in General Assembly convened:

Section 5263 of the general statutes as amended by chapter 260 of the public acts of 1921 and by chapter 260 of the public acts of 1925 is amended to read as follows: No persons shall be joined in marriage until both shall have joined in application to the registrar of births, marriages and deaths in the town in which such marriage is to be celebrated, for a license for such marriage, which application shall be under the oath of each of the applicants and shall state, as to each applicant, the name, age, color, occupation, birthplace, residence, whether single, widowed or divorced and whether under the supervision or control of a guardian or conservator. It shall be sufficient that the application be signed and sworn to by one of the contracting parties when the same shall be filed with the registrar, if, before the certificate shall be granted, the other party shall sign and swear to such application before such registrar. Such registrar shall not issue any certificate until the fifth day following the filing of such application, unless the judge of probate for the district in which the intended marriage is to be celebrated, after hearing such evidence as shall be presented, shall render a decision in writing that, in the opinion of such judge, public policy or the physical condition of either one of the parties requires the intended marriage to be celebrated without delay. Upon receipt of

such decision, such registrar shall place the same on file as a public document and shall immediately issue his certificate which shall state that the parties therein named have complied with the provisions of this act. If no such decision shall have been rendered by such judge of probate, such registrar shall, on the fifth day following the receipt of such application, issue his certificate that the parties therein named have complied with the provisions of this act; but no certificate shall be issued if either of the parties is under the control or supervision of a guardian or conservator, unless the written consent of such guardian or conservator shall be filed with the registrar; nor to parties either of whom is less than sixten years of age unless the judge of probate of the district wherein such minor resides shall endorse on such certificate his written consent; nor to parties either of whom is a minor until a parent or guardian of the person of such minor shall have given to such registrar his consent in writing. If any minor shall have no parent or guardian who is a resident of the United States, the consent of the judge of probate of the district wherein such minor resides shall be sufficient. Such certificate shall be a license for any person authorized to perform the marriage ceremony to join in marriage within such town the parties therein named. Any registrar who shall issue any certificate before the expiration of the period herein provided for or who shall knowingly issue any such certificate without the consent herein provided for and any person who shall join any persons in marriage without having received such certificate, shall be fined not more than one hundred dollars. No person married without the consent herein provided for shall acquire any rights by marriage in the property of any person who shall, at the time of such marriage, be under the supervision of any conservator.

House Bill No. 111.

CHAPTER 7

AN ACT AMENDING AN ACT CONCERNING DISINTERMENT PERMITS.

Be it enacted by the Senate and House of Representatives in General Assembly convened:

Section 335 of the general statutes is amended to read as follows: On receipt by the registrar of vital statistics of any town of a certficate of death containing the facts required by statute for a permit for burial, or or when it appears that such certificate is already a matter of record, or that the original burial permit, by virtue of which the body of any deceased person was brought into such town, is on file or recorded in such registrar's office, the registrar upon request shall issue a permit for the disinterment or removal of such body, stating therein the locality of the interment, disinterment or removal; but no permit for the disinterment of the body of any deceased person shall be issued in any case where death was caused by an infectious disease except by the permission and under the direction of the town health officer.

House Bill No. 852.

CHAPTER 180

AN ACT AMENDING AN ACT CONCERNING THE PRACTICE OF NATUREOPATHY.

Be it enacted by the Senate and House of Representatives in General Assembly convened:

Section eight of chapter 245 of the public acts of 1923 as amended by chapter 281 of the public acts of 1923 is amended to read as follows: For the purpose of this act, the practice of natureopathy shall mean the practice of the psychological, mechanical and material sciences of healing as follows: The psychological sciences, such as psycho-therapy; the mechanical sciences, such as mechano-therapy, articular manipulation, corrective and orthopedic gymnastics, neuro-therapy, physio-therapy, hydro-therapy, electro-therapy, thermo-therapy, photo-therapy, chromo-therapy, vibro-therapy, concussion and pneumato-therapy and the material sciences, such as dietetics, and external applications; but shall not mean internal medication or the administering of any substance simulating medicine or the form of medicine. Nothing in this act shall be construed as changing, altering or repealing any statute concerning the practice of osteopathy or chiropractic.

House Bill No. 861.

CHAPTER 229

AN ACT AMENDING AN ACT CONCERNING APPEALS FROM REVOCATION OF CERTIFICATES BY THE STATE DEPARTMENT OF HEALTH.

Be it enacted by the Senate and House of Representatives in General Assembly convened:

Section 1. Section 2860 of the general statutes is amended to read as follows: If any person shall consider himself aggrieved by the doings of the state department of health under the provisions of section 2859 of the general statutes, he may, within thirty days after having received written notice from said state department of health of the revocation of his certificate of registration, appeal to the superior court within the county where such person resides, which court may grant the proper relief. Such appeals shall be entitled to the privilege provided for in section 5762 of the general statutes and any judge of the superior court may, upon motion, if in his opinion the cause of justice shall require, order any such appeal pending in said court to be transferred to the same court in any other county; and thereupon the clerk of the court in which such action is pending shall transmit to the clerk of the court to which such cause shall have been transferred the original files and papers in such cause with a certificate of such transfer, who shall enter such cause in the docket of said court to which it shall have been so transferred; and such cause shall thereafter be proceeded with in the same manner as if it were originally brought to such court. The provisions of this act shall be applicable to all such appeals pending at the time of the passage of this act.

Sec. 2. This act shall take effect from its passage.

House Bill No. 113.

CHAPTER 164

AN ACT AMENDING AN ACT CONCERNING REPORTS BY PHYSICIANS OF CONTAGIOUS DISEASES

Be it enacted by the Senate and House of Representatives in General Assembly convened:

Section 2415 of the general statutes is amended to read as follows: Every physician shall report in writing every case of cholera, yellow fever, typhus fever, leprosy, smallpox, diphtheria, membranous croup, typhoid fever, scarlet fever, diseases of a venereal nature or other contagious or infectious diseases occurring in his practice, to the health officer of the town, city or borough in which such case shall occur, within twelve hours after his recognition of the disease, provided, in reporting any disease of a venereal nature, the name of the patient suffering from the same shall not be disclosed, except that any physician who has been treating a case of venereal disease shall report the patient by name, address, age and occupation when the patient shall fail to return for treatment while in the communicable stage of the disease. Every person who shall violate any provision hereof shall be fined not more than twenty-five dollars.

Substitute for House Bill No. 110.

CHAPTER 326

AN ACT AUTHORIZING THE STATE DEPARTMENT OF HEALTH TO INVESTIGATE AND MAKE RECOMMENDATIONS FOR THE ELIMINATION OR PREVENTION OF OCCUPATIONAL DISEASES AND MAKING AN APPROPRIATION THEREFOR.

Be it enacted by the Senate and House of Representatives in General Assembly convened:

Section 1. The state department of health is authorized to investigate and to make recommendations for the elimination or prevention of occupational diseases which have been reported to it or which shall be reported to it in accordance with the provisions of chapter 93 of the public acts of 1923. Said department is also authorized to study and provide advice in regard to conditions that may be suspected of causing occupational diseases.

Sec. 2. The sum of seventeen thousand five hundred dollars is appropriated for the purpose of carrying out the provisions of this act.

Substitute for House Bill No. 699.

CHAPTER 296

AN ACT AMENDING AN ACT ESTABLISHING A STATE BOARD OF HEALING ARTS.

Be it enacted by the Senate and House of Representatives in General Assembly convened:

Section three of chapter 161 of the public acts of 1925 is amended to read as follows: Any person desiring to take an examination to be ad-

mitted to practice any branch of the healing arts, or any subdivision thereof, who shall submit to the state board of healing arts evidence satisfactory to said board that he is a person of good moral character, that he was a graduate of a standard approved high school or that he possessed educational qualifications equivalent to those required for graduation by such high school before he began the study of the healing arts and submit evidence to the state board of healing arts that he has met the requirements of the general statutes as to professional training and has, as shown by written examination by said board, a comprehensive knowledge of anatomy, physiology, hygiene, pathology and diagnosis, upon payment of a fee of five dollars, shall receive from said board a certificate which shall be prerequisite to examination by the Connecticut medical examining board, the Connecticut homeopathic medical examining board, the Connecticut eclectic medical examining board, the state board of osteopathic registration and examination, the state board of chiropractic examiners or the state board of natureopathic examiners. Any person desiring, on account of having been previously licensed or registered to practice any branch of the healing arts, or any subdivision thereof, in any other state of the United States or in the District of Columbia, or on account of holding a certificate of the national board of medical examiners, to be considered, without examination, by any of said examining boards for admission to practice any branch of the healing arts, or any subdivision thereof, in this state, who shall submit to said board of healing arts evidence satisfactory to said board that he is a person of good moral character, that he was a graduate of a standard approved high school or that he possessed educational qualifications equivalent to those required for graduation by such high school before he began the study of the healing arts and that he has met the requirements of the general statutes as to professional training and that he possesses a comprehensive knowledge of anatomy, physiology, hygiene, pathology and diagnosis, shall, upon the payment of five dollars, receive from said board a certificate which shall be prerequisite to the appearance of such person before any of said examining boards on application for admission without examination as aforesaid; provided any such person who shall have been in active and reputable practice in any other state of the United States or in the District of Columbia continuously for a period of five years preceding application for admission to practice in this state shall not be required to obtain such prerequisite certificate from said board of healing arts.

Substitute for House Bill No. 713.

CHAPTER 317

AN ACT CONCERNING THE PRACTICE OF THE HEALING ARTS.

Be it enacted by the Senate and House of Representatives in General Assembly convened:

Section 1. Section 2855 of the general statutes as amended by section one of chapter 267 of the public acts of 1925 is amended to read as follows: No person shall receive a certificate of registration under the provisions of section 2854 of the general statutes until he shall have passed an examination before one of the examining committees appointed for such purpose by the governor, except as hereinafter provided, and until he shall have filed with the state department of health duplicate certificates signed by a majority of the examining committee, which certificates shall include a statement that the person named therein has been examined and found qualified to practice either medicine or surgery, nor until he shall have filed with said department duplicate statements subscribed and sworn to

by him, which shall be made upon blanks furnished by said department and shall include the name, age, place of birth and residence, the medical college of which he is a graduate and the date of his graduation, with such other information as shall be required upon such blanks. No person shall be eligible to take such examination until the committee shall find that such person is a resident of this state or intends in good faith to permanently reside in this state and that he has received a diploma from some legally incorporated and reputable medical college as provided in section 2857 of the general statutes, nor until he shall have presented to said committee a certificate of good moral character signed by two reputable citizens of this state, nor until said committee shall find that, before beginning the study of medicine, he was graduated from a college, high school or preparatory school, the standing of which shall have been approved by said committee, or that his education is equivalent thereto, or that it shall have been a condition of entrance to the medical college from which such person shall have received a diploma that students in such college shall have received a high school education or the equivalent thereof. No person shall be eligible for such examination under the provisions of the general statutes until said committee shall find, in addition to the foregoing provisions, that, before beginning the study of medicine, such person shall have completed a course of study of at least nine months' duration, which shall have included chemistry, physics and general biology, provided this provision shall not apply to any applicant who shall have been graduated from a recognized medical college prior to January 1, 1919, nor to any person who was eligible to examination before said date and who shall have failed to pass such examination. Any one of the examining committees appointed under the provisions of section 2856 of the general statutes may accept the license of any state board of medical examiners of any state in the United States or in the District of Columbia, or the certificate of the national board of medical examiners, in lieu of the examination herein provided for, provided the committee before which such applicant shall appear shall find that such license shall have been issued upon an examination passed by such applicant of as high a grade and of the same kind as that required by said examining committee, that he is a resident of this state or that he intends in good faith to permanently reside herein, that he has been in actual practice for a period of three years part of which time he may have served as an interne in a hospital approved by the committee immediately preceding the date of his application and that he is of good moral character and professional standing, and, upon receipt of the sum of fifteen dollars, said committee may issue to such applicant a certificate of approval of such license. Any physician who shall have been graduated from any incorporated and reputable medical college and who began the practice of medicine outside of this state prior to May 25, 1893, who shall appear before any one of the examining committees appointed under the provisions of section 2856 of the general statutes and whom such committee shall find to be a resident of this state or intending in good faith to permanently reside herein, and to have been in actual practice for a period of at least six months in the year immediately preceding the date of his application, and to be of good moral character and professional standing, and to have received the approval of the state board of medical examiners of the state in which he shall have resided next preceding his application to the committee of this state, may, upon the payment of the sum of fifteen dollars, receive a certificate of approval without examination. Any person who shall have passed the examination required under the provisions of the general statutes or shall have obtained a certificate of approval shall, upon filing such certificates and statements with the state department of health, receive from said department, upon the payment of two dollars, a certificate of registration, which certificate shall include a statement that the person named therein is qualified to practice medicine or surgery. Each of the examining

committees provided for under the general statutes shall file with the state department of health, within thirty days after the close of each examination, a list of applicants examined by it since the last preceding examination, and such list shall state the names of such applicants as shall have failed to pass such examination.

Sec. 2. Section 2857 of the general statutes is amended to read as follows: The examining committees provided for by section 2856 of the general statutes shall hold examinations on the second Tuesdays of March, July and November of each year, at such places as they may designate, and at such other times and places as they shall determine. Applicants for certificates to practice medicine or surgery shall be examined in anatomy, physiology, medical chemistry, obstetrics, hygiene, surgery, pathology, diagnosis, therapeutics, practice and materia medica. Each committee shall frame its own questions and conduct its examination in writing, and both questions and answers shall be filed with and preserved for at least six years by the state department of health. Each of said committees shall make such rules and regulations for conducting such examinations under the provisions of chapter 148 of the general statutes as, from time to time, it shall deem necessary. Each applicant for examination under the provisions of said chapter 148 shall be examined by the committee representing the same school of practice in which the applicant was graduated; but before taking such examination he shall pay to the committee the sum of fifteen dollars. An applicant rejected by an examining committee may be re-examined by the committee before whom he appeared, at any subsequent meeting of said committee. Upon the receipt of the duplicate statements as provided in section 2855 of the general statutes as herein amended, the state department of health shall transmit one of said duplicate statements, together with a statement that a certificate of registration has been issued, to the town clerk of the town wherein the person filing such statements resides; and in case such person shall not reside in this state, the state department of health shall hold such statements until notified by such person of the name of the town in this state in which he intends to reside, when said department shall transmit such statements to the town clerk of such town; and such town clerk shall record the same in a book to be provided for that purpose by the state department of health, and shall then return the same to the person who filed such statements with said department; and such town clerk shall receive for such recording a fee of twenty-five cents, to be paid by the state department of health from the amount paid to it as aforesaid. The secretary of each of said medical societies shall file annually with the commissioner of health a list of medical colleges or institutions recognized as legal and reputable by his socety or all of such secretaries may agree upon a single list; and such list or lists may be corrected as may be necessary.

Sec. 3. Section 2869 of the general statutes as amended by section two of chapter 30 of the public acts of 1923 and by section one of chapter 221 of the public acts of 1925, is amended to read as follows: No person shall engage in the practice of chiropractic in this state until such person shall have obtained a certificate of registration and until such certificate shall have been recorded, as herein provided. No person shall receive a certificate of registration until such person shall have passed an examination before the board of chiropractic examiners, except as hereinafter provided, nor until he shall have filed with the state department of health duplicate certificates signed by a majority of said board, which certificates shall include a statement that the person named therein has been examined and found qualified to practice chiropractic, nor until he shall have filed with said department duplicate statements subscribed and sworn to by him, which shall be made upon blanks furnished by said department and shall include his name, age, place of birth and residence, the chiro-

practic college of which he is a graduate and the date of graduation, with such other information as shall be required upon such blanks. Any person desiring to practice chiropractic shall make application to the board of chiropractic examiners, through the secretary-treasurer thereof, upon such form as the board shall adopt, at least fifteen days prior to any meeting of said board. Applications shall be in writing, signed by the applicant and sworn to before an officer authorized to administer oaths and shall contain a statement of the educational advantages of the applicant, his experience in matters pertaining to a knowledge of the care of the sick, the length of time applied and the school in which he studied chiropractic, any collateral branch of study and the length of time engaged in clinical practice and any diploma, certificate or degree which may have been conferred upon such applicant, with such evidence of good character and reputation as shall be required by said board. Each applicant shall present to said board satisfactory evidence that he is a resident of this state or intends in good faith to permanently reside here, that he graduated from an approved high school or possessed educational qualifications equivalent to those required for graduation from such school before beginning the study of chiropractic and that he is a graduate of a reputable college of chiropractic, which college shall, prior to July 1, 1932, have a course of instruction of three years of six months each, each of which years shall include nine hundred class hours or more of actual attendance, and, after said July 1, 1923, shall have a course of instruction which shall require four college years of thirty-six weeks each. Said board shall issue a certificate of approval to each applicant who shall pass the examination and who shall have met all other requirements of the board. There shall be paid to the secretary-treasurer of said board by each applicant a fee of twenty-five dollars, fifteen dollars to accompany the application and the balance to be paid upon the issuance of such certificate of approval. A fee of ten dollars shall be paid the secretary-treasurer of said board for each re-examination. Said board may grant a certificate of approval without examination to any licentiate of a similar board from any other state, who shall meet the educational and other requirements of this section and who shall furnish a certificate from the board under which a license shall have been held, certifying the applicant to be of good repute and that he or she has practiced under license for at least three years. There shall be paid to the secretary-treasurer of said board by each such applicant a fee of fifty dollars, twenty-five of which shall accompany the application, and the balance shall be paid upon the issuance of such certificate of approval. Any person who shall have passed the examination before said board or shall have obtained a certificate of approval from said board shall, upon filing such certificates and statements as herein provided with the state department of health, receive from said department, upon the payment of two dollars, a certificate of registration, which certificate shall include a statement that the person named therein is qualified to practice chiropractic. Any person practicing chiropractic in this state under a license granted by the board of chiropractic examiners previous to the passage of this act shall, upon filing such license, together with the duplicate statements provided for herein, with the state department of health, receive from said department, upon the payment of two dollars, a certificate of registration. Upon the receipt of the duplicate statements as herein provided, the state department of health shall transmit one of such duplicate statements, together with a statement that a certificate of registration has been issued, to the town clerk of the town wherein the person so filing such statement resides; and, in case such person does not reside in this state, the state department of health shall hold such statements until notified by such person of the name of the town in this state in which he intends to reside, when said department shall transmit such statements to the town clerk of such town. The town clerk shall record the same in a book to be provided

for that purpose by the state department of health and shall then return the same to the person who filed the same with said department. The town clerk shall receive for such recording a fee of twenty-five cents, to be paid by the state department of health out of the amount paid to it as aforesaid. The board of chiropractic examiners shall file with the state department of health, within thirty days after the close of each examination, a list of applicants who have appeared before it since the last preceding examination, and such list shall state the names of such applicants as shall have failed to pass such examination or to receive a certificate of approval from said board. The secretary of said board shall file annually with the state department of health a list of chiropractic colleges or institutions recognized by said board as legal and reputable.

Sec. 4. Section 2870 of the general statutes as amended by section two of chapter 221 of the public acts of 1925 is amended to read as follows: With the exception of vertebral palpation and adjusting, the examination provided for in the preceding section, shall be in writing, the subjects of which shall be as follows: Anatomy, physiology, symptomotology, histology, vertebral palpation, principles of chiropractic and adjusting, chemistry, hygiene, pathology, dietetics and diagnosis. Both questions and answers shall be filed with and preserved for a period of six years by the state department of health. Any chiropractor who shall have complied with the provisions of chapter 150 of the general statutes may adjust by hand any articulation of the spinal column, but shall not prescribe for or administer to any person any medicine or drug included in materia medica or perform any surgery or practice obstetrics or osteopathy.

Sec. 5. Section three of chapter 245 of the public acts of 1923 as amended by chapter 218 of the public acts of 1925 is amended to read as follows: No person shall engage in the practice of natureopathy in this state until such person shall have obtained a certificate of registration and until such certificate has been recorded, as herein provided. No person shall receive a certificate of registration until such person shall have passed an examination before the board of natureopathic examiners, except as hereinafter provided, nor until he shall have filed with the state department of health duplicate certificates signed by a majority of said board, which certificates shall include a statement that the person named therein has been examined and found qualified to practice natureopathy, nor until he shall have filed with said department duplicate statements subscribed and sworn to by him, which shall be made upon blanks furnished by said department and shall include his name, age, place of birth and residence, the natureopathic college of which he is a graduate and the date of graduation, with such other information as shall be required upon such blanks. Any person desiring to practice natureopathy shall make application to the board of natureopathic examiners through the secretary thereof, upon such form as it shall adopt, at least fifteen days prior to any meeting of said board. Applications shall be in writing upon blanks furnished by said board, setting forth such facts concerning the applicant as said board shall require and shall be signed by the applicant and sworn to before an officer authorized to administer oaths. Each applicant shall present to said board satisfactory evidence that he is a resident of this state or intends in good faith to permanently reside here, that he graduated from an approved high school or possessed educational qualifications equivalent to those required for graduation from such school before beginning the study of natureopathy and that he is a graduate of a legally chartered, reputable school or college of natureopathy, approved by said board, which school shall require of such applicant a course of resident instruction of at least four years, and each year shall consist of thirty-six weeks of actual attendance. Said board shall issue a certicate of approval to each applicant who shall pass the examination and who

shall have met all other requirements of the board. There shall be paid to the treasurer of said board by such applicant a fee of twenty-five dollars, ten dollars of which shall accompany the application and shall not be refunded if such applicant shall fail to pass the examination, and the balance of such fee shall be paid upon issuance of a certificate of approval. Any person who shall have passed the examination before said board or shall have obtained a certificate of approval from said board shall, upon filing such certificates and statements as herein provided with the state department of health, receive from said department, upon the payment of two dollars, a certificate of registration, which certificate shall include a statement that the person named therein is qualified to practice natureopathy. Any person practicing natureopathy in this state under a license granted by the board of natureopathic examiners previous to the passage of this act shall, upon filing such license, together with the duplicate statements provided for in this act, with the state department of health, receive from said department, upon the payment of two dollars, a certificate of registration. Upon the receipt of the duplicate statements as herein provided, the state department of health shall transmit one of such duplicate statements, together with a statement that a certificate of registration has been issued, to the town clerk of the town wherein the person so filing such statements resides; and, in case such person does not reside in this state, the state department of health shall hold such statements until notified by such person of the name of the town in this state in which he intends to reside, when said department shall transmit such statements to the town clerk of such town. The town clerk shall record the same in a book to be provided for that purpose by the state department of health and shall then return the same to the person who filed the same with said department. The town clerk shall receive for such recording a fee of twenty-five cents, to be paid by the state department of health out of the amount paid to it as aforesaid. The board of natureopathic examiners shall file with the state department of health, within thirty days after the close of each examination, a list of applicants who have appeared before it since the last preceding examination, and such list shall state the names of such applicants as shall have failed to pass such examination or to receive a certificate of approval from said board. The secretary of said board shall file annually with the state department of health a list of natureopathic colleges or institutions recognized by said board as legal and reputable.

Sec. 6. Section four of chapter 245 of the public acts of 1923 is amended to read as follows: Each applicant for the certificate of registration provided for in the preceding section shall take a written examination on the following subjects: Anatomy, physiology, histology, psychology, chemistry, hygiene, public health, dietetics, jurisprudence, natureopathic pathology, diagnosis and theory and practice of natureopathic therapeutics. Both questions and answers shall be filed with and preserved for a period of six years by the state department of health.

Sec. 7. Section seven of chapter 245 of the public acts of 1923 is amended to read as follows: Said board may grant a certificate of approval without examination to any person who shall have been in active and continuous practice of natureopathy for three successive years in any other state and who shall meet the educational and other requirements of section three of said chapter 245 as amended by section six of this act and who shall satisfy the board as to his fitness to engage in such practice. Said board shall have power to enter into agreements of reciprocity with a board of natureopathic examiners in any other state whose requirements shall be equal to those of this state.

Sec. 8. Whenever any person registered under the provisions of the general statutes to practice any branch of the healing arts shall remove his residence from the town in which he has been recorded with the town

clerk, he shall, within thirty days thereafter, notify the state department of health of the name of the town to which he has removed and shall file the same statements with the town clerk of such town that were originally filed for him by the state department of health. The town clerk shall record such statements in a book provided for such purpose by the state department of health as aforesaid, and shall return such statements to the person who filed the same, and the town clerk shall receive from such person a recording fee of twenty-five cents.

Sec. 9. The governor may remove from office any member of any of the examining boards provided for in chapters 148, 149 and 150 of the general statutes and chapter 245 of the public acts of 1923 upon proof of the inability or misconduct of any such member and, upon such removal, may appoint a successor.

Sec. 10. Section one of chapter 120 of the public acts of 1919 is amended to read as follows: Every person licensed under the provisions of the general statutes, or who may receive such license to practice medicine, surgery, midwifery, chiropractic, natureopathy, chiropody or nursing or any person licensed to use any means or agency to treat, prescribe for, heal or otherwise alleviate human ills, deformity, ailment or disease, shall, annually, during the month of January, register with the state department of health, upon payment of a fee of two dollars, on blanks to be furnished by said department for such purpose, giving his name in full, his residence and business address, and such other information as said department shall request. No provision of this section shall be construed to include any person practicing dentistry, osteopathy, optometry or Christian science. On or before the first day of March in each year, the state department of health shall cause to be printed and mailed to each person who shall have registered in accordance with the provisions of this act a list of the names of all such registered persons, and there shall be printed at the beginning of such list the following: "Each person receiving this list is requested to report to the state department of health the name and address of any person known to be practicing any branch of the healing arts, or any subdivision thereof, in this state whose name fails to appear in this registry. The names of persons giving such information will not be divulged."

Sec. 11. Section 6507 of the general statutes is amended to read as follows: No person engaged in the practice of any branch of the art of healing the sick or injured or professing to be engaged in such practice shall make use of the title "doctor" or any abbreviation thereof without further specification or qualification descriptive of the school or kind of practice engaged in by such person, or advertise himself as possessor of such title, unless he shall have received a degree of doctor of medicine, doctor of osteopathy or doctor of dental surgery from a reputable university or college authorized by law to confer such a degree; and no person who has not been legally licensed or registered to practice any branch of the healing arts in this state shall use or advertise or permit to be used or advertised in connection with his name or any trade name in the conduct of any occupation or profession involving or pertaining to public health the title "doctor" or any abbreviation thereof or any designation tending to designate him as a person capable of the diagnosis, treatment, prevention or cure of any human disease, pain, injury, deformity or physical condition, actual or imaginary; provided any dentist who shall have received a degree of doctor of dental surgery from a reputable university or college authorized by law to confer such degree and who is licensed to practice dentistry in this state, shall not be prevented from designating himself as the possessor of such degree or title. No provision of this section shall apply to any person admitted to practice under the provisions of the medical registration act of 1893. Any person violating any provision of this section shall be fined not more than one hundred dollars or imprisoned not more than sixty days or both.

Sec. 12. The license or registration of any licensed or registered practitioner of the healing arts in this state may be revoked, suspended or annulled, or such practitioner may be reprimanded or otherwise disciplined, in accordance with the provisions of this act, upon decision after notice and hearing, by the examining board representing the branch of the healing arts practiced by such practitioner, for any of the following reasons: (a) Conviction in a court of competent jurisdiction, either within or without this state, of any crime involving moral turpitude or of any crime in the practice of his profession or of a felony or of a misdemeanor; (b) immoral, fraudulent, dishonorable or unprofessional conduct; (c) illegal or incompetent or habitually negligent conduct in the practice of his profession; (d) habitual intemperance in the use of spirituous stimulants or addiction to the use of morphine, cocaine or other drugs having similar effect (e) advertising which may be considered by such examining board to be deceptive, misleading, extravagant, improbable or unethical; (f) aiding or abetting the practice of any of the healing arts by an unlicensed person or a person whose license has been suspended or revoked; (g) failure to record his license or certificate of registration as required by law; or (h) insanity of such practitioner. The clerk of any court in this state in which a person practicing any of the healing arts shall have been convicted of any crime or misdemeanor shall, upon such conviction, make written report, in duplicate, to the state department of health of the name and residence of such person, the crime of which such person has been convicted, the date of conviction and the branch of the healing arts practiced by such person; and said department shall forward one of such duplicate reports to the examining board representing the branch of the healing arts practiced by such person.

Sec. 13. The examining board representing the branch of the healing arts practiced by any licensed or registered practitioner of the healing arts in this state shall have jurisdiction to hear charges against such practitioner. Any practitioner against whom charges shall be brought shall be furnished by said board with a statement of the charges in writing, together with a notice of the time and place of hearing thereon, at least ten days prior to the date fixed by said board for such hearing. If it shall be impossible to make personal service or service upon counsel, the secretary of said board shall cause to be published three times, at least thirty days prior to the hearing, a notice of the hearing in a newspaper published in the county in this state in which such practitioner was last known to reside, and a copy of such notice shall also be mailed to the accused at his last-known address. Such practitioner shall have a right to a hearing before said board in person or by attorney and may produce witnesses and evidence in his behalf and examine witnesses and have subpoenas issued by said board, and said board may issue subpoenas and may examine witnesses concerning the guilt or innocence of such practitioner. The attorney general shall furnish legal advice and assistance to said board whenever such service shall have been requested. If, by unanimous vote of said board, the practitioner shall be found guilty of such charges or any of them, said board may, in its discretion, by written notice, reprimand or otherwise discipline such practitioner, or may, by written request of all the members of said board, recommend to the state department of health that the license or certificate of registration of such practitioner be revoked or be suspended for a period of time to be stated in such request. If the practitioner shall be found not guilty, said board shall order a dismissal of the charges. Upon receipt of any request for revocation or suspension as herein provided, the state department of health shall issue an order revoking the license or certificate of registration of such practitioner in accordance with such request, and shall transmit one copy of such order of revocation or suspension to such practitioner at his last known address and one copy of such order to the town clerk of

the town wherein the practitioner has last resided; and said town clerk shall record such order in the book provided by the state department of health for the recording of certificates of registration under the provisions of the general statutes and shall make a memorandum on the page where such practitioner's license or certificate of registration has been recorded, stating the book and page where such order of revocation or suspension has been recorded.

Sec. 14. Any person who shall consider himself aggrieved by the finding of such board may, within thirty days after written notice thereof from said board or from said department, appeal therefrom to the superior court to be held within the county where he resides, which court may grant such relief as to equity may appertain. Such appeal shall not act as a supersedeas of such finding or order unless so ordered either by said board or by the superior court or by a judge thereof. The attorney general shall act as attorney in the public interest in defending against such appeal.

Sec. 15. If the judgment against any practitioner convicted in a court as specified in paragraph (a) of section thirteen of this act shall be subsequently reversed by a court of competent jurisdiction, the board which recommended revocation or suspension of the license or registration of such person shall, upon receipt of a certified copy of the judgment or order of reversal, restore to such person the right to practice, and the state department of health, upon written notice from said board that such right to practice has been restored, shall annul or vacate any order which revoked the license or registration of such practitioner because of such conviction; and the state department of health shall send notice of the fact of such order of reversal and restoration of the right to practice to the town clerk with whom such revocation or suspension has been recorded.

Sec. 16. No provision of this act shall be construed as repealing any part of section eight of this chapter 161 of the public acts of 1925.

Sec. 17. No person shall (a) buy, sell or fraudulently obtain or furnish any diploma, certificate, license, record or registration purporting to show that any person is qualified or authorized to practice any branch of the healing arts, or any subdivision thereof, or any occupation or profession, such as dentistry or nursing, that relates to public health, or participate in any such act; or (b) practice or attempt or offer or advertise to practice any branch of the healing arts, or any subdivision thereof, or any other occupation or profession relating to public health, under cover of any diploma, certificate, license, record or registration illegally or fraudently obtained or signed, or issued unlawfully or under fraudulent representation or mistake of fact in a material regard; or (c) practice or attempt or offer or advertise to practice any branch of the healing arts or any subdivision thereof or any occupation or profession relating to public health under a name other than his own or under a false or assumed name; or (d) use advertising relating to the public health which is untrue, fraudulent, misleading or deceptive; or (e) give or attempt to give training in any branch of the healing arts or in any subdivision thereof, or aid or participate in the same, without first having received permission to do so from the general assembly; or (f) aid or abet practice in any branch of the healing arts or any subdivision thereof by a person not lawfully licensed or registered or authorized to so practice within this state, or by a person whose license or registration or authorization to so practice shall then be suspended or revoked; and no person shall, during the time his license, registration or authorization to practice any branch of the healing arts or any subdivision thereof shall be suspended

or revoked, practice or attempt or offer or advertise to practice such branch or subdivision, or be employed by, work for or assist, in any way, any person licensed or registered to practice any branch of the healing arts or any subdivision thereof in this state. No provision of this section shall be construed to prevent any student in, or graduate from, any legal and reputable professional school, from taking supplementary training with any regularly licensed and reputable practitioner, or from serving as interne in a hospital. Any person who shall violate any provision of this section shall be fined not more than five hundred dollars or imprisoned not more than one year or both for each separate violation and, for a second offense shall be both so fined and imprisoned.

Sec. 18. Sections 2859, 2860, 2861 and 2873 of the general statutes, that portion of sections 2862 and 2863 of the general statutes as amended relating to persons practicing a branch of the healing arts inconsistent herewith, that portion of section 2866 of the general statutes relating to the revocation of a license inconsistent herewith, that portion of section 2872 of the general statutes as amended by section three of chapter 221 of the public acts of 1925 relating to the revocation of a license or causing a licensee's name to be removed from the records of the board of chiropractic examiners inconsistent herewith and that portion of section six of chapter 245 of the public acts of 1923 relating to the suspension or revocation of a license inconsistent herewith, are repealed.

List of Other Miscellaneous Bills Pertaining to Public Health

Substitute for Senate Bill No. 372.

An Act Concerning the Practice of Dentistry.

Senate Bill No. 612.

An Act Concerning the Licensing of Hairdressers and Cosmeticians.

Senate Bill No. 243.

An Act Amending An Act Concerning Employment of Minors and Women in Manufacturing, Mechanical or Mercantile Establishments.

Substitute for Senate Bill No. 490.

An Act Creating a Department of Control and Finance and Defining Its Rights, Powers and Duties.

House Bill No. 115.

An Act Amending an Act Concerning the Sale of Impure Milk.

House Bill No. 399.

An Act Amending An Act Concerning the Disposal of Diseased Animals.

Substitute for House Bill No. 327.

An Act Amending An Act Concerning Smoking on Street Cars.

NEWS NOTES FROM THE FIELD

Physicians Licensed

During the month of May the following physicians have been licensed by the State Department of Health:
New Haven, Conn., Levine, Edward P., 1418 Chapel Street.
Stamford, Conn., Hamilton, John S. M., Stamford Hospital.
Waterbury, Conn., Foster, John H., 57 North Main Street.

Health Officers Appointed

Fairfield County Health Officer, James A. Marr, Esq., has appointed David A. Bryce, M. D., as health officer of Darien during the absence of Dr. William H. Slaughter.

Tolland County Health Officer, M. D. O'Connell, Esq., has announced the appointment of Mr. Ellsworth L. Covell as health officer of Andover succeeding Mr. Herbert A. Thompson.

Schools 100 per cent Immunized Against Diphtheria

In answer to a recent challenge appearing in one of the State Department of Health Bulletins, one of the school nurses in New Haven County has submitted the following list of schools which are 100 per cent immunized against diphtheria:

Crean Hill School, Cornwall.
Bronica School, Kent.
Macedonia School, Kent.
Lake School, Warren.

Visitors Welcomed

Under the auspices of the International Health Board, Dr. George K. Strode, of the Harvard School of Public Health visited the State Department of Health learning of its activities through a personal conference with the director of each of the bureaus.

Three groups of students have been received at the Bureau of Laboratories (1) Seventy-five premedical and graduate students from the Department of Bacteriology of Yale University with Dr. W. L. Kulp from that department (2) a group of students from the Bacteriology Department of Connecticut College, New London, with Dr. Fernald, head of that department (3) a group of premedical students from Trinity College with Dr. Swan.

In each case lectures and demonstrations were given by the laboratory staff in the various branches of laboratory work.

Vital Statistics

MONTH OF APRIL

TOTALS FOR FIRST FOUR MONTHS OF THE YEAR 1927, 1926, 1925

	Births	Birth Rate*	Marriages	Mar. Rate*	Deaths	Death Rate*
1927	9,360	17.7±.1	2,873	5.4±.05	6,141	11.6±.1
1926	9,690	18.7±.1	2,904	5.6±.05	7,189	13.7±.1
1925	9,946	19.5±.1	3,075	6.0±.06	6,561	12.9±.1

*Rate on annual basis, per 1,000 population.

The above figures include all late reports. In the tabulation, two facts stand out distinctly. First is the low birth rate. It is not as low as the 17.0 published last month for figures covering the first three months, but it is none the less a very low rate.

The second feature is the remarkable reduction in deaths. There are some 1,048 fewer deaths this year than for last year. The rate is 11.6 per 1,000 of the population. This is an exceptionally low rate for the unfavorable months of the year, which are the first three or four months. It seems assured now that 1927 will be a very healthy year for the state and may even surpass the year 1924 when the rate was 11.3 and the lowest ever recorded.

Births

Copies of 2,272 birth certificates were received in the department. This total is 163 below the 2,435 received in 1926 and 184 below the average of 2,456 for the past six years.

Of the 49 towns over 5,000 in population, 26 reported more births in 1927 than for April 1926. Of the 26 only 6 reported increases of 10 or more, namely the following:

Bristol	11±10	Meriden	15±10
East Hartford	17± 5	Stamford	15±14
Fairfield	12± 5	West Hartford	12± 7

The increases for East Hartford and Fairfield would be significant were it not for the system of allocation which has been established beginning with 1927. Under this new procedure the birth is credited to the town of residence of the mother. Of course it is apparent that 1927 and 1926 are not strictly comparable. In the case of East Hartford and Fairfield, no doubt, the gain has been made at the expense of Hartford and Bridgeport respectively.

For the month 82 stillbirths were reported, which is 11 less than the 93 reported in 1926. The rates with their standard deviations are, for 1927, 38.2±4.2, and 36.8±3.7 for 1926, rates expressed per 1,000 total births. There is no significant increase.

Deaths

The records of 1,532 deaths were received which is 412 less than the 1,944 reported in 1926. This is a truly remarkable decrease. With respect to rates the rate in 1927 is 11.6 per 1,000 population and it was 14.9 in 1926, which was a relatively unfavorable month in comparison with the past six years. The rate for 1927 is the most favorable in the last few years and holds promise of being the basis for the most favorable year in the history of the state.

Analyzing the deaths by causes will give the following table which compares 1927 with 1926.

Cause of Death	1927	1926	Increase	Decrease
Disease of the heart	235±15	263±16	....	28±22
Epidemic Encephalitis	2± 1	0	2± 1	....
Pneumonia undefined	2± 1	4± 2	....	2± 2
Typhoid Fever	0	1± 1	....	1± 1
Measles	3± 2	29± 5	....	26± 6
Scarlet Fever	4± 2	3± 2	1± 3	....
Whooping Cough	2± 1	13± 4	....	11± 4
Diphtheria	6± 2	8± 3	....	2± 4
Influenza	46± 7	173±13	....	127±15
Tuberculosis, pulmonary	87± 9	100±10	....	13±14
Tuberculosis, other forms	13± 4	24± 5	....	11± 6
Cancer	121±11	138±12	....	17±16
Cerebrospinal Meningitis	1± 1	2± 1	....	1± 2
Poliomyelitis	0	1± 1	....	1± 1
Lobar Pneumonia	96±10	148±12	....	52±16
Broncho Pneumonia	66± 8	131±11	....	65±14
Diarrhoea & Enteritis under 2	8± 3	11± 3	....	3± 4
Puerperal Diseases	17± 4	12± 3	5± 5	....
Accident	82± 9	70± 8	12±12	....
Suicide	17± 4	16± 4	1± 6	....
Homicide	3± 2	7± 3	....	4± 3
Other Causes	721±27	790±28	....	69±39
Totals	1,532±39	1,944±44	21	433

There has been a decrease in diseases of the heart, and while it is not exactly of moment in this month, still if maintained throughout the year will result in a decrease of significance.

The decrease in measles is of decided account. And also the decrease in whooping cough. The decrease of greatest value is the decrease of 127 in influenza. This decrease is more than 8 times its standard deviation and as any value which is 3 times its standard deviation is extremely significant, it will be appreciated how much more important this decrease is.

Very decided decreases were also experienced in lobar and broncho pneumonia and on the whole it was a most encouraging month.

If we compare the accumulated totals, first four months, for certain diseases for 1927 and 1926, the following table will result:

Diseases	1927	1926	Decrease
Diseases of the Heart	1,030	1,091	61
Typhoid Fever	5	9	4
Measles	14	151	137
Scarlet Fever	11	20	9
Diphtheria	28	48	20
Influenza	179	417	238
Tuberculosis, all forms	398	439	41
Lobar Pneumonia	268	551	283
Broncho Pneumonia	282	405	123
Totals	2,215	3,131	916

This table nearly accounts for the 1,048 total decrease in deaths to date.

With regard to automobile accidental deaths, there were 28 this year as compared with 19 in 1926.

FOR SIX YEARS—APRIL, 1927

CONNECTICUT	1922	1923	1924	1925	1926	1927
BIRTHS	2442	2565	2568	2455	2435	2272
Birth Rate	20.2	20.9	20.5	19.3	18.7	17.2
DEATHS	1564	1704	1516	1644	1944	1532
Death Rate	13.0	13.9	12.1	12.9	14.9	11.6
MARRIAGES	929	1166	959	970	980	920
Marriage Rate	7.6	9.4	7.7	7.6	7.5	6.9
COMMUNICABLE DIS.* DEATHS	224	238	180	211	330	149
Per Cent to Total Deaths	14.3	14.0	11.9	12.8	16.9	9.7
DEATHS UNDER 1 YEAR	238	266	165	199	218	151
Rate Per 1,000 Births	90.0	103.6	62.3	80.1	90.6	63.1

*Includes Typhoid Fever, Measles, Scarlet Fever, Whooping Cough, Diphtheria, Tuberculosis Pulmonary, Cerebrospinal Meningitis, Poliomyelitis, Influenza.

Statistics
April, 1927

	Population Est. as of July 1, 1927 Based on U. S. Census	TOTALS				DEATH RATES			AGE GROUPS		
		Births	Stillbirths	Marriages	Deaths	All Causes (per 1,000 population)	Tuberculosis (per 1,000 population)	Children under 1 year (per 1,000 births)	Under 1 year	1 to 5 years	65 years and over
State of Connecticut	**1,586,435**	**2272**	**82**	**920**	**1532**	**11.6**	**0.7**	**63.1**	**151**	**50**	**581**
Ansonia	19,548	35	1	8	13	7.9	.....	104.8	2	1	3
Branford	7,073	5	1	4	6	10.2	.....	.....	.....	.....	2
Bridgeport	174,890	245	6	89	130	8.9	0.8	35.3	9	3	45
Bristol	26,087	55	2	18	24	11.0	1.4	35.6	2	1	7
Danbury	21,931	39	1	17	39	21.3	1.6	45.8	2	.....	14
Derby	12,963	12	1	4	10	9.2	0.9	29.1	1	.....	2
East Hartford	14,311	22	.....	6	17	14.3	.....	320.0	4	.....	7
Enfield	13,241	19	1	15	9	8.2	.....	.....	.....	.....	6
Fairfield	15,541	19	.....	3	13	10.0	.....	.....	.....	1	7
Glastonbury	6,206	8	.....	4	9	17.4	.....	500.0	3	1	3
Greenwich	26,373	27	3	51	25	11.4	.....	47.5	2	.....	8
Groton	11,326	18	.....	8	14	14.8	1.1	109.1	1	.....	5
Hamden	10,718	13	2	6	12	13.4	2.2	70.1	1	1	2
Hartford	168,258	251	11	115	142	10.1	0.4	55.1	19	9	43
Killingly	9,384	12	.....	8	7	8.9	1.3	137.9	2	.....	2
Manchester	21,992	33	.....	13	17	9.3	.....	61.4	2	.....	7
Meriden	36.807	63	2	28	39	12.7	0.9	68.6	4	1	15
Middletown	22,932	21	3	12	24	12.6	.....	20.9	1	.....	9
Milford	14,673	4	.....	.....	3	2.5	.....	.....	.....	.....	3
Naugatuck	16,829	20	.....	7	13	9.3	.....	100.0	1	.....	4
New Britain	71,068	114	5	35	60	10.1	1.4	99.5	13	1	16
New Haven	184,727	259	12	122	181	11.7	0.6	48.5	15	12	70
New London	30,149	36	1	20	20	8.0	0.8	.....	.....	.....	7
Norwalk	30,173	47	1	17	33	13.1	0.4	70.6	4	.....	13
Norwich	30,689	41	3	11	35	13.7	0.8	.....	.....	1	15
Plainfield	8,818	12	.....	2	7	9.5	.....	.....	.....	.....	1
Plainville	5,064	5	.....	1	4	9.4	.....	.....	.....	.....	2
Plymouth	6,459	5	1	.....	5	9.3	.....	296.3	2	.....	2
Putnam	9,220	12	2	9	11	14.3	2.6	132.6	2	.....	4
Seymour	8,321	4	.....	2	5	7.2	.....	136.4	1	.....	1
Shelton	11,699	16	1	3	8	8.2	.....	255.3	3	.....	2
Southington	9,925	19	.....	6	9	10.9	.....	69.8	1	.....	3
Stafford	5,472	11	1	1	7	15.4	.....	.....	.....	.....	3
Stamford	48,515	109	4	34	62	15.3	0.7	43.0	4	2	20
Stonington	11,041	10	.....	3	11	12.0	.....	93.8	1	.....	5
Stratford	17,451	26	1	9	13	8.9	0.7	.....	.....	.....	7
Thompson	5,226	4	.....	4	5	11.5	.....	162.2	1	1	2
Torrington	25,316	27	1	14	21	10.0	.....	98.8	4	1	10
Vernon	8,751	17	2	2	9	12.3	2.7	76.4	1	.....	4
Wallingford	12,659	13	.....	4	13	12.3	0.9	122.4	1	.....	5
Waterbury	105,960	146	3	71	88	10.0	1.0	59.1	11	6	18
Watertown	7,506	11	.....	4	8	12.8	.....	307.7	2	.....	.....
West Hartford	11,908	28	1	12	12	12.1	.....	142.0	2	1	6
West Haven	18.834	38	5	14	26	16.6	1.3	.....	.....	.....	12
Westport	5,772	5	.....	3	6	12.5	.....	.....	.....	.....	4
Wethersfield	5.264	6	.....	3	9	20.5	.....	.....	.....	1	4
Winchester	9,104	7	.....	3	17	22.4	1.3	61.9	1	1	11
Windham	14,418	18	.....	12	17	14.1	1.7	40.4	1	1	7
Windsor	6,732	11	.....	.....	5	8.9	.....	210.5	1	.....	.....
Towns under 5,000	209,106	268	4	83	239	13.7	0.6	86.5	22	4	124
Other States	.....	26	.....	.....	20	.....	.....	.....	2	.....	9

DEATHS FROM IMPORTANT CAUSES

Diseases of the Heart	Encephalitis Epidemic	Pneumonia Undefined	Typhoid Fever	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Influenza	Tuberculosis-Pulmonary	Tuberculosis Other forms	Cancer	Meningitis-Cerebrospinal	Poliomyelitis	Pneumonia—Lobar	Pneumonia—Broncho	Diarrhoea-Enteritis Under 2	Puerperal Diseases	Accident	Suicide	Homicide	Institutional Deaths	Non-resident Deaths
235	2	2	.....	3	4	2	6	46	87	13	121	1	.....	96	66	8	17	82	17	3	578	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	2	.....	.....	.....	1	.....	3	.....
.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....	1	.....	.....	1	1	.....	.....	3	.....
18	.....	.....	.....	.....	.....	.....	1	.....	11	1	11	.....	.....	6	4	.....	1	7	.....	.....	64	.....
4	.....	.....	.....	2	1	.....	.....	1	3	.....	1	.....	.....	.....	.....	.....	1	.....	.....	.....	10	.....
4	.....	.....	.....	.....	.....	.....	.....	1	3	1	1	.....	.....	4	1	.....	1	1	.....	.....	13	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....	1	1	.....	.....	2	.....	.....	1	.....
3	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	3	.....	.....	.....	1	.....	.....	1	.....	.....	8	.....
1	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	3	.....	.....	.....	1	.....	.....	.....	.....	.....	1	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	.....
1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....	3	.....
4	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	4	.....	.....	2	1	.....	.....	2	.....	.....	10	.....
4	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....	2	2	.....	.....	.....	.....	.....	1	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	1	.....	1	1	1	.....	.....	5	.....
23	1	.....	.....	.....	.....	.....	.....	1	6	3	12	.....	.....	17	8	3	2	4	2	.....	77	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
5	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	1	.....	5	.....
5	.....	.....	.....	.....	.....	.....	.....	1	3	.....	1	.....	.....	2	.....	.....	.....	2	2	.....	10	.....
4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....	2	.....	.....	1	2	.....	.....	13	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....
.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1	.....	.....	3	.....
10	1	.....	.....	.....	.....	.....	.....	3	8	1	4	.....	.....	3	4	.....	.....	4	.....	.....	27	.....
20	.....	1	.....	.....	1	.....	.....	16	9	2	19	.....	.....	10	11	.....	3	11	3	.....	87	.....
3	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	2	.....	.....	2	.....	.....	.....	2	.....	.....	5	.....
3	.....	.....	.....	.....	.....	1	.....	.....	1	.....	3	.....	.....	1	.....	.....	.....	2	.....	1	6	.....
5	.....	.....	.....	.....	.....	.....	.....	2	2	.....	2	.....	.....	2	2	.....	.....	3	1	.....	11	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....	.....	.....	4	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....	3	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	1	.....	2	.....
1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1	.....	.....	1	.....	.....	1	.....	.....	.....	2	.....
3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	2	.....
7	.....	.....	.....	.....	.....	.....	1	2	3	.....	3	.....	.....	3	3	1	1	8	1	1	30	.....
4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
4	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	4	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	2	1	.....	.....	.....	.....	.....	1	.....
4	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	3	.....	.....	1	1	.....	.....	.....	1	.....	5	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	2	.....	.....	.....	1	.....	.....	1	.....	.....	7	.....
13	.....	.....	.....	.....	.....	.....	1	4	9	.....	2	.....	.....	6	6	1	3	5	1	.....	35	.....
1	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....
3	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....	1	.....	1	.....	1	.....	.....	3	.....
5	.....	.....	.....	.....	.....	.....	.....	3	2	1	3	.....	.....	1	1	.....	.....	1	1	.....	11	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....	.....	2	.....
3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	2	.....	.....	.....	.....	.....	.....	1	.....
3	.....	.....	.....	.....	.....	.....	.....	1	1	.....	3	.....	.....	.....	1	.....	.....	.....	.....	.....	7	.....
2	.....	.....	.....	.....	1	1	.....	.....	2	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	4	.....
45	.....	.....	.....	1	.....	.....	1	6	10	1	18	.....	.....	16	11	1	.....	11	1	1	58	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	2	.....	.....	2	.....	.....	.....	1	.....	.....	13	.....

Laboratories

SUMMARY OF BUREAU ACTIVITIES FOR MAY, 1927

DIAGNOSTIC

	+	—	?	Unclassified	Total	
Typhoid	....	293	....	....	293	
Paratyphoid A	....	293	....	....	293	
Paratyphoid B	....	293	....	....	293	
Diphtheria	72	1,085	....	....	1,157	
Diphtheria Virulence	19	31	....	....	50	
Vincent's Angina	2	695	....	....	697	
Hemolytic Streptococci	31	666	....	....	697	
Tuberculosis	20	232	....	....	252	
Syphilis	386	1,834	91	....	2,311	
Gonorrhoea	15	82	....	....	97	
Pneumonia	3	....	....	....	3	
Rabies	11	9	....	....	20	
Malaria	....	3	....	....	3	
Special Specimens	2	16	....	84	102	6,268

CHEMICAL AND BACTERIOLOGICAL

Milk samples	333	
Water samples	455	
Sewage samples	48	
Sea Food samples	27	
Clinical thermometers	524	1,387
Total examinations made		7,655

Laboratory Work on Rabies Continues to Increase

Of twenty animals' heads received for examination during May nine dogs' heads, a cat's head and the head of a cow showed Negri bodies under the microscope, proving that the animals were suffering from rabies at the time they died or were killed by the dog warden. It would appear from the laboratory records that the disease is on the increase, as only one head was positive for rabies in January, none in February, two in March and six in April. The disease is spread chiefly through the virus in the saliva of infected animals.

The health departments of the City and State of New York and the State of New Jersey have recently been calling attention through their bulletins to the increase of cases of rabies in these adjoining territories. Because of the excellent follow-up and control work carried out by the State Commissioner on Domestic Animals and his deputies in Connecticut, rabies in animals is kept under very strict control. Health officers and physicians, however, should be on the watch to cooperate with them whenever emergencies arise.

Preventable Diseases

INCIDENCE OF DISEASE FOR MONTH OF MAY, 1927

(As compared with previous years)

A comparison of the daily morbidity reports received during the month of May, 1927, with the corresponding month for the years 1922, 1923, 1924, 1925 and 1926.

DISEASE	Average 1922-1926 for May	Mean 1922-1926 for May	1922	1923	1924	1925	1926	1927
Cerebrospinal Meningitis ..	9	5	10	10	4	4	5	3
Diphtheria	138	125	152	226	125	103	83	103
Encephalitis Epidemic	5	5	6	6	4	5	4	1
Measles	1,320	1,035	1,664	1,035	675	985	2,293	215
Poliomyelitis	1	1	3	1	1	1	....	1
Scarlet Fever	365	348	272	348	495	362	348	390
Smallpox	13	12	53	1	12	2	....	....
Typhoid Fever	14	12	11	12	15	19	12	2
Tuberculosis Pulmonary	142	143	161	164	137	104	143	141
Whooping Cough	233	216	136	224	109	481	216	163

A comparison of the morbidity on these diseases for the two preceding months, March and April with the May record is as follows:

	March	April	May
Cerebrospinal Meningitis	1	3	3
Diphtheria	123	115	103
Encephalitis Epidemic	....	4	1
Measles	600	326	215
Poliomyelitis	1	2	1
Scarlet Fever	538	424	390
Smallpox	....	....	....
Typhoid Fever	2	2	2
Tuberculosis Pulmonary	122	120	141
Whooping Cough	220	120	163

Cases of Other Reportable Diseases

Chickenpox	502	Mumps	211
Conjunctivitis Infectious	2	Septic Sore Throat	10
Ophthalmia Neonatorum	2	Typhus Fever	1
Dysentery Amoebic	1	Gonorrhoea	123
Encephalitis Epidemic	1	Syphilis	91
German Measles	111		
Influenza	11	Total	1,067
Malaria	1		

Cases of Occupational Diseases

Dermatitis	2	minate of Mercury	13
Fulminate Rash from Fulminate of Mercury	17	Total	32
Toxic Dermatitis, from Ful-			

Cases of Certain Reportable Diseases

May, 1927

	Population Est. as of July 1, 1927	Typhoid Fever	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Meningitis Cerebrospinal	Poliomyelitis	Pulmonary Tuberculosis	Other Forms Tuberculosis	Pneumonia Lobar	Broncho-Pneumonia	Other Com. Diseases
State Total	1,586,435	2	215	390	163	103	3	1	141	22	194	123	1067
NEW HAVEN CO.	**475,419**	**1**	**45**	**58**	**16**	**33**			**39**	**7**	**37**	**19**	**231**
New Haven	184,727	1	2	21	4	7			18	6	12	6	153
Waterbury	105,960		4	14		4			9	1	9	2	14
Meriden (city and town)	36,807		1	14	8	4			2		11	4	38
Ansonia	19,548					3			1				5
West Haven	18,834			4		3			2		1	1	4
Naugatuck	16,829												
Wallingford (town and boro)	12,659								1			1	
Milford	14,673			3	2				1		1	1	6
Derby	12,963					1			1				
Hamden	10,718		38			6			1		1	2	6
Branford (town and boro)	7,073												1
Seymour	8,321					4			1				
Towns under 5,000	26,307			2	2	1			2		2	2	4
FAIRFIELD CO.	**379,505**		**57**	**102**	**24**	**27**	**2**		**31**	**5**	**70**	**20**	**268**
Bridgeport	174,890		30	44		16	1		15	2	21	13	37
Stamford (city and town)	48,515		4	20	4	2	1		3		2		25
Norwalk	30,173			9		2					4		1
Danbury (city and town)	21,921			2	2	1			3		31	3	6
Greenwich (town and boro)	26,373		20	9	11	2			4		2	1	97
Stratford	17,451		1	2		1							1
Fairfield	15,541			6					3				
Shelton	11,699			3		1			3				3
Westport	5,772				1								1
Towns under 5,000	27,160		2	7	6	2				3	10	3	97
HARTFORD CO.	**402,344**	**1**	**56**	**127**	**25**	**26**		**1**	**47**	**10**	**46**	**49**	**288**
Hartford	168,258	1	6	54	11	6			29	5	23	28	134
New Britain	71,068		2	24	4	2			2	2	4	8	19
Bristol (city and town)	26,087		38	28	3	1			6		8	6	10
Manchester	21,992		1	3		9					2	1	5
Enfield	13,241		2			5				1			15
East Hartford	14,311			2	3						1	1	1
Southington (town and boro)	9,925			2	1				6	2	1	1	3
West Hartford	11,908		1	2	1	1			1		2	2	22
Windsor	6,732								2				3
Glastonbury	6,206			1		1							50
Wethersfield	5,264		6	1					1		1		7
Plainville	5,064			6	2								1
Towns under 5,000	42,288			4		1		1			4	2	18
NEW LONDON CO.	**114,930**		**12**	**64**	**39**	**13**	**1**		**9**		**10**	**4**	**65**
Norwich (city and town)	30,689		6	31	1	9			3		2		12
New London	30,149		1	6		3	1		2			2	24
Stonington (town and boro)	11,041			3							2		12
Groton (town and boro)	11,326			1							2	1	5
Towns under 5,000	31,725		5	23	38	1			4		4	1	12
LITCHFIELD CO.	**80,900**		**4**	**11**	**3**	**1**			**6**		**5**	**1**	**27**
Torrington (town and boro)	25,316												
Winchester (inc. Winsted	9,109					1							
Plymouth	6,459		2		2				1				4
Watertown	7,506												
Towns under 5,000	32,510		2	11	1				5		5	1	23
WINDHAM CO.	**56,258**		**32**	**22**	**36**	**2**			**1**		**2**	**1**	**62**
Windham (inc. Willimantic)	14,418												
Putnam (city and town)	9,220			11	4								
Plainfield	8,818		1	3	1						1		
Killingly (inc. Danielson)	5,226			4		1							3
Thompson	9,384			2		1							
Towns under 5,000	9,192		31	2	31				1		1	1	59
MIDDLESEX CO.	**49,279**		**6**	**2**	**13**	**1**			**8**		**21**	**29**	**120**
Middletown (city and town)	22,032		5	1	7						20	28	87
Middletown State Hospital									3				
Towns under 5,000	26,347		1	1	6	1			5		1	1	33
TOLLAND CO.	**27,800**		**3**	**4**	**7**						**3**		**6**
Vernon (inc. Rockville)	8,751										1		1
Stafford (town and boro)	5,472			1							1		
Towns under 5,000	13,577		3	3	7						1		5

State of Connecticut Health Bulletin

"For a Clean State and a Healthy People"

Vol. 41 **JULY, 1927** **No. 7**

This Issue Contains

Connecticut Sends Relief to Flood Area

More About Naming Bacteria Correctly

Births, Deaths and Marriages for May, 1927

Summary of Laboratory Activities for June, 1927

Incidence of Preventable Diseases for June, 1927

STANLEY H. OSBORN, M. D., C. P. H., Commissioner

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CONNECTICUT

HEALTH BULLETIN

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CONNECTICUT SENDS RELIEF TO FLOOD AREA

By Howard A. Lanpher, M. D., M. P. H., Epidemiologist

About the middle of April, the press published news of an overflow in the Mississippi Valley. On April 29 following a meeting of the health officers of the states affected, with officials of the Red Cross, aid was requested from other states. In response to this telegram, eight public health men and three sanitary engineers arrived at Memphis, Tennessee, on May 3. Of the public health men, two were from North Carolina, one from Missouri, one from Virginia, two from Ohio, and two from Connecticut. Of the sanitary engineers, two were from Ohio and one from North Carolina.

Flooded Area Divided into Districts

All of these men were assigned to the state of Arkansas, as being the State most in need of such personnel. Another reason for this assignment was that the flood waters in Arkansas were beginning to recede, while in Louisiana and Missouri, the overflow was just reaching its height.

All the men arrived at Little Rock on May 3 and went into conference with Dr. C. W. Garrison, the State Health Officer. Here the situation was explained in detail and the inundated portions of the state divided into six areas or districts. One of the group was retained as advisor to Dr. Garrison; another was made a sort of scout to learn of conditions in other parts of the state. Later with the coming of more medical personnel the area was divided into fourteen districts which took some of the burden off the original assignments. The men assigned to each division were designated "District Health Officers" and represented directly the Arkansas State Board of Health. Each district health officer was furnished with a duffle bag which could be strapped on the back, and a pair of rubber boots. The bag contained a stethoscope, hypo-

dermic, thermometer, distilled water, adhesive plaster, etc. Included also were tetanus and diphtheria serum, a sterno outfit for sterilization, and a flashlight. The men departed for their respective districts on Thursday, May 5, 1927.

The general objectives set were the coordination of local health officials, Red Cross and civic organizations, relief of the stricken people, protection against disease and disposal of dead animals. More specifically, the objectives sought were the protection of the drinking water, the proper disposal of human wastes and inoculation against typhoid of the refugees. To these were added later, screening of houses, the distribution of quinine, the draining of ditches and the oiling of pools. These last were for the prevention of malaria.

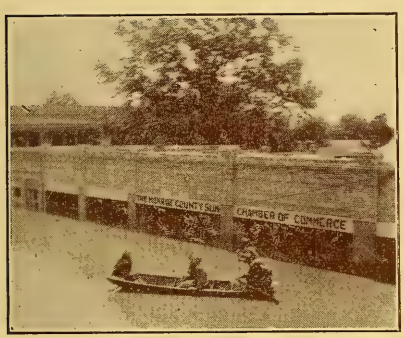
District No. 14. The counties of Monroe, Woodruff, Prairie and Lonoke, comprising an area of 2,649 square miles and having a population of 93,995 fell to the lot of the writer. Later this district was split. Woodruff and Lonoke counties were given to another man, and Monroe and Prairie counties became District No. 14, but there was so much to do and transportation difficulties were so great that the writer never got into Prairie county, and the work done was confined entirely to Monroe county with an area of 603 square miles and a population of 21,601.

A Close-up of Clarendon

Clarendon as the county seat of Monroe county has a normal population of 2,638. Practically all of these people were refugees since there was no house in the city which did not have at least two feet of water in it and many of them had twelve and fifteen feet. This water remained at its height for a period of ten days before beginning to subside.

Clarendon is situated on the White River, east and north of a bend in the river. It is protected from overflow by a levee six and one-half miles long and of sufficient height to give protection against thirty-nine feet of flood water. This height of water was predicted by the local weather bureau and all of the inhabitants were confident that the levee would furnish protection against this amount. On the evening of April 19, the water had risen to a height of forty feet and was running over the top of the levee. At 1.25 A.M. on the 29th of April the water reached the height of 44.3 feet. It was at this time that one of the biggest breaks in the levee occurred releasing with a roar of Niagara a wall of water forty-four feet high upon the stricken town. It was fortunate that the break occurred at that time in the morning, for no one was upon the streets at that hour. It is remarkable that of the population

of 2,638 not a single life was lost, for although the people expected that the water would overflow the levee, they were not prepared for a break in the levee which would release the full head of water.



Clarendon Chamber of Commerce

Houses Swept Away. One hundred and fifty houses in this town were swept from their foundations and floated away. Approximately 200 more were twisted off their foundations but remained on their original sites. As stated above, the least amount of water in any house was two feet and in many instances the water was over the second floor. Not only was damage done to houses and contents but as the flood subsided, a deposit of slimy silt a quarter of an inch thick was left on the inside and outside walls and on all furniture. A deposit of mud from one and one-half to two inches thick was left on the floors. Paper was soaked from the walls, and floor boards and mop boards warped.

The Immediate Problem

The writer arrived in Clarendon on Saturday, May 7. By this time the water had subsided sufficiently to allow a car to be driven on the main street, although the water was still over the running boards. Conditions found after the ebbing of the waters were very discouraging. Many of the townspeople had lost all their possessions save the clothes they had on. These clothes had been soaking wet for three days at the time of the greatest danger, for not only were the people menaced by the flood waters, but during all of three days following the breaking of the levee came heavy rains, accompanied by a high wind which raised waves in the flood water to a height of three feet.

Organization. The first problem to present itself was the organization of committees to be made up of local people for the purpose of bringing order out of the chaotic condition left by the receding waters. Arrangements were made with the mayor for a meeting of local citizens to be held at 2.30 on the day of my arrival in Clarendon. At this meeting the situation was discussed at length. Committees were appointed, each of which should have a specific duty. These duties included, food, housing, clean-up and medical problems. The writer was made chairman of the medical committee and two local physicians were appointed to serve with him.

The sum of $4,000 was promised by the Liaison Officer of the Red Cross. Three hundred mattresses and an appropriate amount of bedding was assured.

Arrangements were made with the Red Cross to hold in readiness for shipment to Clarendon within 12 hours, sufficient equipment for an emergency hospital. This included 20 beds, 10 for whites and 10 for blacks. A room was made ready in the County Court House, the driest building in town in which to set up such a hospital. Fortunately, the need for such a hospital never arose.

His Excellency, the Governor, was petitioned for the use of 24 convicts from the State Penitentiary. These convicts were promised on condition that the railroad would transport them free of charge. This the road promised to do.

Cleaning-up. The convicts arrived on Tuesday, May 10, and immediately went to work cleaning up the streets. When this work was finished they were employed in putting back on their foundations buildings which had been set awry by the flood.

An emergency was declared and the only passable road into Clarendon closed to all except those having legitimate business in Clarendon for a period of ten days. The next day was Sunday and it was estimated that 8,000 people were turned back, all of whom had travelled from far and near to see the "worst stricken city in Arkansas." The work of cleaning up continued all day Sunday and if these visitors had not been excluded they would have created a serious handicap to the workers.

Store keepers and householders placed their wet and sodden belongings on the sidewalks and 10 mule-teams with four men to a team hauled the stuff out of town to a public dump. A guard was placed at the dumping ground to supervise the unloading of the wreckage. As soon as the material dried out sufficiently it was set afire and all consumed except pieces of metal work.

What to do for Safe Water

Meanwhile, the problem of a safe water supply came up. This was a serious problem even from the outset. In "peace times" Clarendon had had a municipal water supply, the water coming from two artesian wells, 178 and 200 feet deep respectively. It was also supplied with a sewerage system. The pumping plants for these systems were situated about 50 yards inside the levee. At the time of the overflow, both stations were flooded to the eaves. The pump-pit of the water system was 15 feet below the ground level. At the height of the flood there was 45 feet of water in the pump house. Of course the water and sewerage systems were put out of commission.

Before my arrival at Clarendon, a pipe had been driven through the flood water before it had entirely subsided and to a depth of only twelve feet. This was the only water supply for the whole town. The pump was placed on the lawn of the County Court House which was centrally situated. During the interval between the subsiding of the waters and my arrival it had been necessary to drink water from this pump without treatment. Fortunately a supply of calcium hypochlorite was taken into the area by the district health officer.

A battery of 12 galvanized iron washtubs was salvaged from a hardware store. These tubs had been submerged and

Drinking Water Made Safe For Flood Victims

were covered with a slimy silt, but they were washed up and made usable. These tubs were set up on a stand about 12

feet from the well and filled with water from the pump. Calcium hypochlorite was added to make the water safe and the populace required to drink only this treated water. Difficulty was experienced in getting the people to drink the water from the tubs because of the unfamiliar taste, so the pump was disconnected by being unscrewed from the pipe after each filling of the tubs. The next move was to get the pumping plant in commission again. The pump pit was bailed out and the pumps cleaned up. By the time this was accomplished the water had receded below the grates in the firebox and a fire was made under the boiler with water only an inch under the grates. In two days the mains were flushed out and a chlorinating machine hooked on to the supply pipe. Thus a safe supply of water was supplied nineteen days after the flood. It was found that the sewerage system had suffered only a few breaks from the flood and this system was put in operation the next day.

Disease Control

People Inoculated. The next thing to which attention was given was the inoculation of the people against typhoid fever. During the next six weeks, 18 clinics were established at which about 6,000 people received inoculations. These were mostly in the rural districts where local doctors could not go.

Little Illness Following the Overflow. Only three cases of typhoid fever occurred among the population of the county. Two of these cases were "imported" from another county. There was some dysentery but no cases were serious. Malaria of course is always a problem in Arkansas. There seemed to be no increase in the number of cases. Cases of pellagra were numerous, seeming to be aggravated by the restriction in diet due to the difficulty of procuring a balanced ration.

Much Yet To Be Done

While the extreme high water has receded there is still much land submerged and the annual "June rise" due to the melting snows on the headwaters of the tributaries to the Mississippi River will do more damage than in preceding years because the crevasses in the levees caused by the April flood are not yet repaired. The work of repairing these breaks, the rehabilitation of the people, the rebuilding of homes, the replacement of live-stock and other items in the general clean-up will require the rest of the summer.

MORE ABOUT NAMING BACTERIA

By Friend Lee Mickle

In the February number of the Health Bulletin an article appeared on bacteriological nomenclature as it relates to the organisms most frequently described in reports from the Bureau of Laboratories. That article was apparently read by a number of bacteriologists who have made many suggestions in regard to it.

One internationally known bacteriologist who is an authority on classification of bacteria has written that there is no sense in abbreviating generic terms in the way that bacteriologists do. He calls attention to the fact that a generic name in bacteriological usage is really similar to a person's last name, and cites as an example that in the telephone book we never think of beginning the list of Smiths with Albert Smith and putting the rest down as John S. etc. Likewise Abe Cohen would begin the list, but we would not think of putting down Isaac C. Similarly no one would think of interpreting *B. vincenti* as *Borellia vincenti.*

Another authority has written regarding the use of abbreviations for the generic names of bacteria about as follows. Never abbreviate where there is the slightest possibility of ambiguity. In case several species of the same genus are to be listed consecutively in a paper it is then permissable to abbreviate the generic name of all except the first named species. Abbreviations in all such cases shall be merely the first letter of the generic name.

B. coli Incorrectly Used

It is well known that the bacteriologists in general are very careless in the use of the proper terms in describing species of bacteria. Those of us who are engaged in the application of bacteriology to practical everyday problems find there is a reason for this. For instance, the species of bacteria that is often present in water supplies and is usually taken as an index of the presence of sewage or other pollution from animal wastes, is generally known by the incorrect name of Bacillus coli. The common, and quite generally accepted, abbreviation for the term is *B. Coli,* and health officers and officials connected with the control of public water supplies know quite well what the laboratory worker means when he reports he has found *"B. coli"* in a water supply. It would not be particularly difficult to change that to to the abbreviation we gave in the February Bulletin of *E. coli* and after a time we could all of us become familiar with the words *E. coli.* It is a much more difficult matter to teach all of us to use the word *Escherichia coli.* As one water superintendent recently said to me, "What new kind of worms are these?"

when I used the term *Escherichia coli* in connection with his supply.

Bacteria as Numerous as Smiths and Jones

While discussing bacteriological nomenclature it seems wise to answer a question that has frequently been asked. That is in regard to the official usage of placing the name of a person quite frequently after the name of a germ, as for instance, *Eberthella dysenteriae* Shiga. There is a mistaken viewpoint that the name of a person who has done the most important piece of work on a given species should be used in that connection somewhat as a tribute to the man who did the work, while the purpose of using a name in this way is quite different from that. It is used merely as a short bibliographical reference to the person who first used that binomial. In many cases the person whose name appears is not the person who originally discovered the organism and quite frequently all he ever did was to give the name. Sometimes the names of two persons follow the name of an organism with one of the proper names in parenthesis. Where a species of organisms has been put into a new genus in reclassifying it at any time the name of the man who gave the species' name appears first in parenthesis, followed by the name of the man who gave the binomial. In using the terms, if either of these names are omitted, it should be the name of the man who gave the species' name, as the important thing is to indicate who first used that particular name. All of this classification and reclassification of bacteria has become necessary because of the thousands of different types of organisms that have been discovered and are of importance to bacteriologists. Someone has said there may be perhaps as many types of bacteria as there are Smiths and Jones in the country. If we consult the telephone directory of any large city we can see the need for some means of classification even with those families and the reason for the elaborate classification of bacteria is a somewhat similar one.

Confusion of Incorrect Names

Professor Stiles in his address* as the retiring president of the American Society of Parasitologists discusses this subject in such an interesting way that his original article is recommended for very careful consideration. He remarks that Raphael Blanchard once defined nomenclature as "the grammar of science" and adds that that is the best definition of it which has come to his attention. He states that in one of his less serious moods he once described zoological nomenclature as "that portion of zoology which puts us to sleep in the daytime and keeps

*"Underlying Factors in the Confusion in Zoological Nomenclature with a Definite Practical Suggestion for the Future." Science, Volume LXV, No. 1678, February 25, 1927.

us awake at night, the combined nightmare, bugbear, bete noir or Katzenjammer of zoologists", and thinks that scientists will agree with him that this is a fairly accurate generic diagnosis. He calls attention to the fact that individuals should not create names for organisms to suit their own convenience but that the vocabulary should be of the profession and not of the individual or we reach a status of theoretical and practical confusion. He gives several instances to emphasize "the tremendous economic loss, in cost of time, effort, study, paper and printer's ink which results." For instance, he considers the economic loss to science because of preventable confusion in the nomenclature of the parasite (*Endamoeba histolytica*) of amoebic dysentery or of the protozoa involved in the malarias of man and bird, has involved the loss of thousands of dollars, and that the preventable confusion in the nomenclature of the common bed bug has been so extensive that it required sixty days of intensive study by several zoologists to work up the case before the International Commission until one commissioner remarked that the time on that case would have been sufficient to convict three murderers. After citing other instances Professor Stiles very pertinently asked, "If the zoological profession continues to permit so much of its funds to be wasted, how can we expect practical business men and legislators to continue their confidence in the ability of the profession to administrate such funds?"

Classification a Necessity

Although fully realizing we may invite criticism from different sources and from various persons, it seems wise that the Laboratories should, in their use of bacteriological terms, follow some classification. Because the classification published in Bergey's Manual has been worked out with the assistance of a committee of the Society of American Bacteriologists it seems wise that the nomenclature of that classification be used in laboratory reports so far as possible, supplementing when necessary with the commonly used name for a given organism.

Correction of typographical errors. It is important at this time to make one or two corrections in the spelling of the names for bacteria that occurred in the previous article as typographical errors. The new official name for the dysentery bacillus should have read *Eberthella* instead of *Ebertrella* as printed. The common name for Vincent's spirillum should be spelled *spirillum* instead of *spirellum.*

Vital Statistics

MONTH OF MAY

TOTALS FOR FIRST FIVE MONTHS OF THE YEAR 1927, 1926, 1925

	Births	Birth Rate*	Marriages	Mar. Rate*	Deaths	Death Rate*
1927	11,776	17.8±.1	3,742	5.7±.06	7,605	11.5±.1
1926	12,278	18.9±.1	3,795	5.8±.06	8,757	13.5±.1
1925	12,520	19.6±.1	3,937	6.2±.06	8,054	12.6±.1

*Rate on annual basis, per 1,000 population.

The figures above include all late reports received to date and a very clear idea may be had as to the relative experience of the past three years. It is quite true, however, that the years 1926 and 1925 have become more stabilized with respect to late reports than 1927. Therefore some revision of the 1927 totals is quite inevitable.

The birth rate is decreasing. And while the number of births is the total most subject to increase by receipts of late reports, still it is hardly likely that the rate will be much affected, and certainly not enough to account for the decrease even in a small amount. The decrease in birth rate seems to be quite general over the country and in England there is a marked decline.

The marriages are decreasing somewhat, but not so pronouncedly as the births. Then, too, it must be remembered that there is a very distinct seasonal variation in regard to the marriages. During Lent the marriages are always fewer. In June and October the number of marriages is always greater and as yet the accumulative figures given above have only the months of relatively fewer marriages included therein.

The most sensational reduction so far in the figures is the lower number of deaths and the consequent reduction in death rate. It will be seen that 1927 is 1152 deaths below 1926 and 449 under 1925. This reduction is best shown in the rate which is 11.5 per 1,000 population and would be a splendid rate for the entire year. As a matter of fact it is the rate for the unfavorable months of the winter. It would seem logical therefore to expect that 1927 may be the record year, even surpassing the low rate of 11.3 in 1924, which is the lowest yet on record.

Births

Records of 2,288 births were received during the month which is a total 296 less than the 2,584 reported in 1926. The rate is 17.3 for 1927 as compared with 19.9 last year. The

accumulated rate is 17.8 for the year so far. This rate of 17.3 is a low rate and is comparable to the rate of 17.2 in April.

There are 49 towns in the state having populations of 5,000 or over; of them 7 reported more births for 1927 than in 1926. They are:

Ansonia	.19±7	Stonington	10±4
East Hartford	13±6	Stratford	13±6
Hamden	23±6	West Hartford	16±6
	West Haven	14±8	

These increases for Ansonia, East Hartford, Hamden, Stonington, Stratford and West Hartford are at least twice their standard deviations due to chance. As example, Ansonia had an increase of 19 with which is associated a chance variation of ±7. A variation which is at least twice its chance fluctuation is considered by many to be significant. However, all of these towns with the possible exception of Stonington are being benefited by the new idea of allocation by which a birth is counted for statistical purposes as of the residence of the mother and not where it may have occurred. This will very naturally increase the number of births in the smaller towns and decrease the larger towns having hospital facilities. Perhaps the effect is best illustrated by a consideration of the births in the towns under 5,000 in population. Comparing 1927 and 1926 there has been an increase of 80±20.

With regard to the stillbirths there were 94 this year and 90 last year. The rate of stillbirths referred to the total births is, for 1927, 40.0±4.0 per 1,000 total births and it was 36.8±3.7 in 1926. The sex ratio is 169 males to 100 females, as of the 94 stillbirths 59 were males and 35 were females. This ratio is considerably higher than any recently experienced.

Deaths

The total number of deaths for the month was 1412 as compared with 1568 in 1926, a decrease of 156. The death rate is 10.7 and is the lowest to appear since 1924 when the rate was also 10.7.

The analysis of the deaths by certain causes and in comparison of 1927 with 1926 yields the following tabular exhibit.

Cause of Death	1927	1926	Increase	Decrease
Diseases of the heart	252±16	220±15	32±22	....
Epidemic Encephalitis	1± 1	6± 2	....	5± 3
Pneumonia Undefined	3± 2	4± 2	....	1± 3
Typhoid Fever	0	1± 1	....	1± 1
Measles	0	24± 5	....	24± 5
Scarlet Fever	2± 1	2± 1	....	....
Whooping Cough	3± 2	11± 3	....	8± 4
Diphtheria	4± 2	4± 2	....	....
Influenza	27± 5	44± 7	....	17± 8
Tuberculosis, pulmonary	89± 9	107±10	....	18±14
Tuberculosis, other forms	16± 4	9± 3	7± 5	....
Cancer	137±12	131±11	6±16	....
Cerebrospinal Meningitis	0	1± 1	....	1± 1
Poliomyelitis	0	0	....	....
Pneumonia, lobar	58± 8	84± 9	....	26±12
Pneumonia, broncho	55± 7	74± 9	....	19±11
Diarrhoea & Enteritis under 2	8± 3	15± 4	....	7± 5
Puerperal Diseases	14± 4	13± 4	1± 5	....
Accident	87± 9	78± 9	9±13	....
Suicide	18± 4	20± 4	....	2± 6
Homicide	2± 1	2± 1	....	....
Other Causes	636±25	718±27	....	82±37
Totals	1,412±38	1,568±40	55	211

First examining the increases there is none to be regarded as significant from the statistical point of view. There is an increase in deaths due to diseases of the heart but it is not in the least alarming and can be more than accounted for as a mere chance fluctuation.

Of the decreases a number are of no inconsiderable importance, chief of which is the decrease in measles deaths. In fact, for May, 1927 measles has produced no fatality. Last year this disease was epidemic. There has been a very encouraging decrease in whooping cough, influenza and lobar pneumonia.

The decrease due to causes of death other than those included in list above is by itself of significance when considered as a whole. Nothing may safely be said about this, however, as many diseases are included herein and the decreases may be so scattered into such small values that they are not of significance.

Of the deaths due to automobile accidents a decrease is noted, 23 occurring in 1927 and 34 in 1926.

FOR SIX YEARS—MAY, 1922-1927

CONNECTICUT	1922	1923	1924	1925	1926	1927
BIRTHS *Birth Rate*	2604 21.6	2669 21.7	2760 22.0	2571 20.2	2584 19.9	2288 17.3
DEATHS *Death Rate*	1457 12.1	1472 12.0	1342 10.7	1493 11.7	1568 12.1	1412 10.7
MARRIAGES *Marriage Rate*	898 7.4	920 7.5	931 7.4	862 6.8	891 6.9	806 6.1
COMMUNICABLE DIS.* DEATHS *Per Cent to Total Deaths*	182 12.5	194 13.2	155 11.5	158 10.6	201 12.9	125 8.9
DEATHS UNDER 1 YEAR *Rate Per 1,000 Births*	191 72.3	169 65.8	175 66.1	186 74.9	194 80.6	124 52.3

*Includes Typhoid Fever, Measles, Scarlet Fever, Whooping Cough, Diphtheria, Tuberculosis Pulmonary, Cerebrospinal Meningitis, Poliomyelitis, Influenza.

Births, Marriages and Deaths

Statistics
May, 1927

	Population Est. as of July 1, 1927 Based on U. S. Census	TOTALS				DEATH RATES			AGE GROUPS		
		Births	Stillbirths	Marriages	Deaths	All Causes (per 1,000 population)	Tuberculosis (per 1,000 population)	Children under 1 year (per 1,000 births)	Under 1 year	1 to 5 years	65 years and over
State of Connecticut	**1,586,435**	**2288**	**94**	**806**	**1412**	**10.7**	**0.7**	**52.3**	**124**	**45**	**529**
Ansonia	19,548	33	1	15	14	8.6	.....	156.5	3	2	1
Branford	7,073	10	1	3	3	5.1	.....	.....	.....	.....	1
Bridgeport	174,890	217	10	94	125	8.6	0.7	39.3	10	2	34
Bristol	26,087	63	3	14	31	14.3	1.4	159.7	9	1	6
Danbury	21,931	41	1	13	26	14.2	1.1	114.5	5	1	7
Derby	12,963	11	4	2	13	12.0	0.9	29.1	1	1	4
East Hartford	14,311	23	.....	5	11	9.2	.....	.....	.....	.....	4
Enfield	13,241	24	.....	6	9	8.2	.....	97.6	2	.....	4
Fairfield	15,541	14	.....	2	9	6.9	.....	89.6	1	.....	4
Glastonbury	6,206	5	.....	3	7	13.5	1.9	.....	.....	.....	1
Greenwich	26,373	38	.....	46	27	12.3	.....	47.4	2	.....	10
Groton	11,326	11	1	6	16	17.0	.....	.....	.....	.....	13
Hamden	10,718	31	.....	7	11	12.3	1.1	140.4	2	.....	3
Hartford	168,258	265	17	74	136	9.7	0.7	46.4	6	5	53
Killingly	9,384	11	1	10	6	7.7	1.3	206.9	3	.....	2
Manchester	21,992	26	.....	10	20	10.9	.....	61.2	2	.....	5
Meriden	36,807	63	4	23	39	12.7	0.3	51.4	3	2	15
Middletown	22,932	25	5	14	16	8.4	1.0	.....	.....	.....	7
Milford	14,673	20	.....	4	13	10.6	.....	.....	.....	1	8
Naugatuck	16,829	20	.....	9	13	9.3	1.4	.....	.....	.....	4
New Britain	71,068	110	7	45	68	11.5	0.7	114.8	15	3	17
New Haven	184,727	274	8	89	152	9.9	0.8	29.1	9	7	58
New London	30,149	31	2	20	31	12.3	.....	90.6	6	1	12
Norwalk	30,173	44	2	13	34	13.5	0.8	35.3	2	2	11
Norwich	30,689	52	.....	21	41	16.0	0.8	32.1	2	1	16
Plainfield	8,818	12	.....	8	7	9.5	.....	93.0	1	1	3
Plainville	5.064	3	.....	.....	1	2.4	.....	.....	.....	.....	.....
Plymouth	6,459	9	.....	3	.....	.....	.....	.....	.....	.....	.....
Putnam	9,220	10	2	13	8	10.4	.....	.....	.....	1	5
Seymour	8,321	4	.....	1	2	2.9	.....	.....	.....	.....	.....
Shelton	11,699	18	.....	6	7	7.2	.....	.....	.....	.....	3
Southington	9,925	18	.....	6	6	7.3	1.2	69.8	1	1	2
Stafford	5,472	9	1	3	1	2.2	.....	.....	.....	.....	1
Stamford	48,515	91	4	25	55	13.6	0.7	21.5	2	1	20
Stonington	11,041	15	.....	5	13	14.1	.....	.....	.....	.....	7
Stratford	17,451	25	1	5	10	6.9	.....	140.4	2	1	2
Thompson	5,226	8	.....	6	3	6.9	.....	.....	.....	.....	1
Torrington	25,316	43	1	8	24	11.4	1.4	24.7	1	.....	7
Vernon	8,751	13	2	6	7	9.6	.....	76.4	1	.....	3
Wallingford	12,659	8	.....	.....	1	0.9	.....	.....	.....	.....	.....
Waterbury	105,960	132	11	46	77	8.7	1.1	37.6	7	1	26
Watertown	7,506	15	1	1	2	3.2	.....	.....	.....	.....	1
West Hartford	11,908	27	.....	7	27	27.2	1.0	568.0	8	.....	10
West Haven	18,834	42	.....	3	28	17.8	0.6	195.6	6	.....	12
Westport	5,772	9	.....	2	6	12.5	.....	.....	.....	1	2
Wethersfield	5,264	7	.....	2	6	13.7	.....	.....	.....	.....	4
Winchester	9,104	.....	.....	.....	11	14.5	.....	123.7	2	.....	5
Windham	14,418	24	1	9	10	8.3	.....	.....	.....	.....	7
Windsor	6,732	9	1	1	9	16.0	1.8	.....	.....	.....	5
Towns under 5,000	209,106	248	2	92	197	11.3	0.7	39.3	10	9	98
Other States	.....	27	.....	.....	23	.....	.....	.....	.....	.....	5

DEATHS FROM IMPORTANT CAUSES

Diseases of the Heart	Encephalitis Epidemic	Pneumonia Undefined	Typhoid Fever	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Influenza	Tuberculosis-Pulmonary	Tuberculosis Other forms	Cancer	Meningitis-Cerebrospinal	Poliomyelitis	Pneumonia—Lobar	Pneumonia—Broncho	Diarrhoea-Enteritis Under 2	Puerperal Diseases	Accident	Suicide	Homicide	Institutional Deaths	Non-resident Deaths
252	1	3			2	3	4	27	89	16	137			58	55	8	14	87	18	2	513	
1											3					1		2			8	
								1										1			1	
13							1	2	10	1	11			4	7		3	5	3		57	
1						1			3		5			2	1			1			12	
2	1								2		4			5	1			2	1		7	
3								1	1					1	1			1			4	
3														1	1			1			6	
2								1			1				2						1	
2										1	1							1			2	
1									1		1							1			2	
5											3				1			3	1		5	
4											3							2			3	
3									1					1	1						3	
31						1		3	10	1	12			8	3		1	7	2		69	
1									1													
2											6			2	1						13	
7								1	1		4			2	2			2			9	
3								1	2	1	2						1		1		6	
3										1	2				1			1			7	
2									2	1	2			1							4	
8					1				4	1	10			1	6			6	1		16	
31		2			1		1	6	12		13			3	11		5	10	1		55	
8											3			2	2	2		3	1		16	
5								1	2	2	2			2	2			2	1		13	
10								1	2		1							5	1		15	
2														1				1			2	
																					1	
3					1						2				1						2	
2																						
1								2			1										1	
									1	1								1			1	
																					1	
8								3	3	2	6			1			1	3			19	
7										1	1							1			2	
3																		1			3	
								1						1								
4									3		2							3			8	
3											1										4	
																	1				1	
12								1	10		5			5	1	1		5	2	1	29	
4									1					2	1	3		1			16	
6									1		3			1	3			1			8	
								1							1				1		1	
3											1											
3										1	1										3	
2											1			1				1			2	
1									1		1							1			3	
30		1					1	2	13	2	22			10	5	1	2	11	2	1	58	
7									2		1			1				1			14	

Laboratories

SUMMARY OF BUREAU ACTIVITIES FOR JUNE, 1927

DIAGNOSTIC

	+	—	?	Unclassified	Total	
Typhoid	....	200	1	....	201	
Paratyphoid A	....	201	....	....	201	
Paratyphoid B	....	201	....	....	201	
Diphtheria	82	1,428	....	....	1,510	
Diphtheria Virulence	11	15	....	....	26	
Vincent's Angina	8	772	....	....	780	
Hemolytic Streptococci	27	752	....	....	779	
Tuberculosis	15	192	....	....	207	
Syphilis	432	2,306	138	....	2,876	
Gonorrhoea	28	95	....	....	123	
Pneumonia	1	1	....	....	2	
Rabies	10	5	....	....	15	
Malaria	1	6	....	....	7	
Special Specimens	8	11	....	93	112	7,040

CHEMICAL AND BACTERIOLOGICAL

Milk samples	378	
Water samples	644	
Sewage samples	8	
Sea-food samples	32	
Clinical thermometers	506	1,568
Total examinations made		8,608

JUNE BREAKS ALL RECORDS

The laboratory work during June has been so greatly in excess of that for any previous corresponding month that the laboratory staff has been taxed to its utmost to handle the number of examinations carried out. The following tabulation shows the enormous growth of laboratory work as indicated by a comparison of the examinations made in June during the last four years:

June—1924	Total examinations		2,362
June—1925	"	"	4,060
June—1926	"	"	6,148
June—1927	"	"	8,608

A large portion of the increase has been due to the routine examination of milk handlers at certified milk farms. The number of samples of milk examined during June of this year, however, is not as great as during several previous months of June.

Preventable Diseases

INCIDENCE OF DISEASE FOR MONTH OF JUNE, 1927

(As compared with previous years)

A comparison of the daily morbidity reports received during the month of June, 1927, with the corresponding month for the years 1922, 1923, 1924, 1925 and 1926.

DISEASE	Average 1922-1926 for June	Mean 1922-1926 for June	1922	1923	1924	1925	1926	1927
Cerebrospinal Meningitis	4	5	5	5	2	1	5	4
Diphtheria	115	122	154	136	111	122	53	138
Encephalitis Epidemic	4	2	....	6	7	6	2	4
Measles	1,033	1,049	1,437	556	512	1,049	1,612	252
Poliomyelitis	....	....	....	....	2	1	....	1
Scarlet Fever	245	230	159	230	341	180	314	277
Smallpox	8	3	26	3	8	....	2	....
Typhoid Fever	17	12	39	9	12	14	9	5
Tuberculosis Pulmonary	137	136	136	137	128	136	149	150
Whooping Cough	215	165	115	262	74	458	165	98

A comparison of the morbidity on these diseases for the two preceding months, April and May with the June record is as follows:

	April	May	June
Cerebrospinal Meningitis	3	3	4
Diphtheria	115	103	138
Encephalitis Epidemic	4	1	4
Measles	326	215	252
Poliomyelitis	2	1	1
Scarlet Fever	424	390	277
Smallpox	....	....	....
Typhoid Fever	2	2	5
Tuberculosis Pulmonary	120	141	150
Whooping Cough	120	163	98

Cases of Other Reportable Diseases

Actinomycosis	1	Septic Sore Throat	17
Chickenpox	469	Trachoma	1
Encephalitis Epidemic	4	Typhus Fever	1
German Measles	25	Gonorrhoea	186
Influenza	9	Syphilis	129
Leprosy	1	Chancroid	4
Malaria	5	Ophthalmia Neonatorum	2
Mumps	167		
Paratyphoid Fever	1	Total	1022

Cases of Occupational Diseases

Conjunctivitis	1	Dermatitis	3
Eczema	1	Toxic Dermatitis	3
Fulminate of Mercury Dermatitis	5	Total	13

Cases of Certain Reportable Diseases

June, 1927

	Population Est. as of July 1, 1927	Typhoid Fever	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Meningitis Cerebrospinal	Poliomyelitis	Pulmonary Tuberculosis	Other Forms Tuberculosis	Pneumonia Lobar	Broncho-Pneumonia	Other Com. Diseases
State Total	**1,586,435**	**5**	**252**	**277**	**98**	**138**	**4**	**1**	**150**	**15**	**113**	**90**	**1022**
NEW HAVEN CO.	**475,419**	**1**	**78**	**84**	**21**	**55**	.....	.....	**66**	**7**	**10**	**10**	**214**
New Haven	184,727	.....	54	12	6	1	.....	.....	48	4	1	4	133
Waterbury	105,960	.....	13	12	.....	4	.....	.....	10	.....	1	1	8
Meriden (city and town)	36,807	.....	1	19	5	2	.....	.....	4	2	3	2	30
Ansonia	19,548	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
West Haven	18,834	.....	1	9	.....	5	.....	.....	.....	1	1	2	4
Naugatuck	16,829	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wallingford (town and boro)	12,659	.....	.....	5	.....	10	.....	.....	1	.....	3	.....	.....
Milford	14,673	.....	.....	3	2	.....	.....	.....	1	.....	1	.....	5
Derby	12,963	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	1
Hamden	10,718	.....	9	2	.....	3	.....	.....	.....	.....	.....	.....	13
Branford (town and boro)	7,073	.....	.....	16	.....	.....	.....	.....	.....	.....	.....	.....	2
Seymour	8,321	.....	.....	2	.....	30	.....	.....	.....	.....	.....	.....	3
Towns under 5,000	26,307	1	.....	3	8	.....	.....	.....	.....	.....	.....	1	15
FAIRFIELD CO.	**379,505**	.....	**93**	**56**	**15**	**44**	**1**	**1**	**16**	**2**	**29**	**13**	**205**
Bridgeport	174,890	.....	8	22	2	29	.....	.....	7	2	14	7	49
Stamford (city and town)	48,515	.....	6	9	2	.....	.....	.....	2	.....	1	.....	28
Norwalk	30,173	.....	2	2	.....	2	.....	.....	2	.....	.....	.....	2
Danbury (city and town)	21,921	.....	.....	1	.....	.....	.....	.....	1	.....	1	1	4
Greenwich (town and boro)	26,373	.....	76	3	9	.....	.....	.....	1	.....	2	1	66
Stratford	17,451	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fairfield	15,541	.....	.....	6	.....	3	.....	.....	2	.....	1	.....	.....
Shelton	11,699	.....	1	.....	.....	.....	.....	.....	1	.....	1	.....	1
Westport	5,772	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Towns under 5,000	27,160	.....	.....	13	2	10	1	1	.....	.....	9	4	55
HARTFORD CO.	**402,344**	**4**	**35**	**79**	**39**	**25**	**2**	.....	**21**	**5**	**48**	**42**	**338**
Hartford	168,258	3	16	34	25	15	1	.....	10	3	25	14	214
New Britain	71,068	.....	2	18	6	1	.....	.....	5	1	5	12	24
Bristol (city and town)	26,087	.....	6	11	.....	.....	.....	.....	2	.....	3	1	5
Manchester	21,992	.....	.....	1	3	6	.....	.....	3	1	4	.....	7
Enfield	13,241	.....	.....	.....	.....	1	.....	.....	1	.....	1	2	13
East Hartford	14,311	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	8
Southington (town and boro)	9,925	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1	1
West Hartford	11,908	.....	2	5	5	.....	.....	.....	.....	.....	3	3	7
Windsor	6,732	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	20
Glastonbury	6,206	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
Wethersfield	5,264	.....	9	3	.....	1	.....	.....	.....	.....	.....	.....	18
Plainville	5,064	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Towns under 5,000	42,288	.....	.....	6	.....	.....	1	.....	.....	.....	7	6	21
NEW LONDON CO.	**114,930**	.....	**4**	**40**	**4**	**8**	**1**	.....	**34**	**1**	**10**	**8**	**54**
Norwich (city and town)	30,689	.....	.....	28	.....	6	.....	.....	2	.....	1	.....	1
New London	30,149	.....	.....	5	2	1	.....	.....	1	1	1	4	19
Stonington (town and boro)	11,041	.....	.....	3	.....	.....	.....	.....	.....	.....	2	.....	1
Groton (town and boro)	11,326	.....	.....	.....	.....	.....	.....	.....	1	.....	3	.....	5
Towns under 5,000	31,725	.....	4	4	2	1	*1	.....	30	.....	3	4	28
LITCHFIELD CO.	**80,900**	.....	.....	**4**	**2**	**3**	.....	.....	**2**	.....	**3**	**3**	**15**
Torrington (town and boro)	25,316	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Winchester (inc. Winsted	9,106	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Plymouth	6,459	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Watertown	7,506	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Towns under 5,000	32,510	.....	.....	4	2	3	.....	.....	2	.....	3	3	14
WINDHAM CO.	**56,258**	.....	**36**	**9**	**9**	.....	.....	.....	**6**	.....	**2**	**1**	**98**
Windham (inc. Willimantic)	14,418	.....	2	2	.....	.....	.....	.....	2	.....	.....	.....	.....
Putnam (city and town)	9,220	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	1
Plainfield	8,818	.....	1	1	.....	.....	.....	.....	.....	.....	.....	1	.....
Killingly (inc. Danielson)	5,226	.....	.....	2	.....	.....	.....	.....	2	.....	.....	.....	8
Thompson	9,384	.....	2	2	.....	.....	.....	.....	1	.....	2	.....	1
Towns under 5,000	9,192	.....	30	1	9	.....	.....	.....	1	.....	.....	.....	88
MIDDLESEX CO.	**49,279**	.....	**6**	**3**	**2**	**2**	.....	.....	**4**	.....	**10**	**13**	**76**
Middletown (city and town)	22,032	.....	6	1	2	1	.....	.....	2	.....	9	12	40
Middletown State Hospital	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
Towns under 5,000	26,347	.....	.....	2	.....	1	.....	.....	2	.....	1	1	34
TOLLAND CO.	**27,800**	.....	.....	**2**	**6**	**1**	.....	.....	**1**	.....	**1**	.....	**22**
Vernon (inc. Rockville)	8,751	.....	.....	.....	.....	1	.....	.....	1	.....	1	.....	1
Stafford (town and boro)	5,472	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Towns under 5,000	13,577	.....	.....	2	6	.....	.....	.....	.....	.....	.....	.....	21

State of Connecticut Health Bulletin

"For a Clean State and a Healthy People"

Vol. 41 AUGUST, 1927 No. 8

This Issue Contains

Appeals of Physicians Dismissed

Progress of the Summer Round-up

Social Hygiene (A Radio Message)

Summary of Laboratory Activities for July, 1927

Births, Deaths and Marriages for June, 1927

Incidence of Preventable Diseases for July, 1927

STANLEY H. OSBORN, M. D., C. P. H., Commissioner

ISSUED BY
State Department of Health
HARTFORD

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CONNECTICUT STATE DEPARTMENT OF HEALTH
8 WASHINGTON STREET,
HARTFORD

CONNECTICUT
HEALTH BULLETIN
Vol. 41 August, 1927 No. 8
Issued Monthly by the
STATE DEPARTMENT OF HEALTH

APPEALS OF ECLECTICS DISMISSED

The following appeals taken by the physicians listed below, after the state department of health had revoked their licenses to practice medicine in Connecticut, have been dismissed by the Court. Accordingly they are no longer entitled to practice medicine in the State of Connecticut. The last known address of these persons is given also. The department would appreciate receiving the information if any of these persons are found practicing medicine in Connecticut.

Name	Last Address and Date Given	
Braverman, Harry	441 Atlantic St., Stamford, Conn.	1923
Burstan, Lillian L.	33 Coleman St., Bridgeport, Conn.	1926
Bush, Andrew P.	33 Court St., New Britain, Conn.	1927
Christian, James A.	640 Post Rd., Fairfield Conn.	1923
Cotner, James W.	2816 Main St., Stratford, Conn.	1925
Cotner, Jennie S.	2816 Main St., Stratford, Conn.	1925
Desaunier, Leon F.	158 Columbus Ave., New Haven, Conn.	1927

THE SUMMER ROUND-UP OF CHILDREN BY THE CONNECTICUT CONGRESS OF PARENTS AND TEACHERS AND THE STATE DEPARTMENT OF HEALTH

By A. Elizabeth Ingraham

Whether children are physically fit according to high standards and what steps are being taken to secure this end are questions that parents and all persons interested in the well-being of children are asking. Are children being protected from diseases? Will diphtheria, like black winged death hover in the background because our little ones have not been made immune to it?

What is being done all along the line, physically, mentally, morally and spiritually, to try to secure the ideally four-square child?

Mother Nature is a wonderful caretaker of her children, but she gets along faster if we do our part toward helping.

Campaign Inaugurated

In 1925 there was inaugurated a campaign to send to the kindergarten and first grade, groups of children 100 per cent free from remediable defects.

The National Congress of Parents and Teachers was back of this campaign because it realized the need of a complete physical examination if each child was to be sent to school for the first time in as healthy a condition as possible.

One year before this began, the Connecticut State Department of Health was doing this work with as many children as it could reach through its well child conferences. So in 1926, in answer to this great movement, our State Department of Health, through its Bureau of Child Hygiene, offered its services to the State Parent and Teacher Association to help in any way in which it could fit in co-operatively.

Organizing the Work

Under the leadership of the former, an organized plan of work has been arrived at. If there are any local doctors and nurses, they are asked to come in and help do the examining. A committee of resident helpers is then formed. A house to house registration of the pre-school children is made; an automobile corps is asked for to bring children from the outlying districts to the examining center. A place is selected for the health centre and a date for the examination is decided upon. With all this done a publicity campaign is launched through the local newspapers.

With preliminary work out of the way the children are then brought together for examination. A history is first taken which includes the date of its birth, any childhood diseases that it may have had previously, also any data pertaining to the development of the child from birth to its sixth year. In this way some sort of picture of the child's physical life is gained.

The Examination

The children are next weighed and measured to help gauge their degree of normalcy in nutrition. Should they be a little underweight, it does not matter. Should they be a bit overweight, we do not care. If we find, however, 7 per cent or more underweight, when the child is brought in to the examining room, an investigation of its food and habits is at once begun —how much milk is he drinking daily; does he eat fruit instead of candy; has the right amount of leafy vegetables been given him; does he have enough hours of sleep; does he live and play out of doors in the sunshine, with his arms, legs, neck, and head exposed to the direct rays of the sun? Faulty postural defects, often due to careless position of the body during play, receive especial attention since they may lead eventually to a deflected spine, or a narrowed chest thus hampering the development of the organs of the thorax.

If any defects requiring medical or surgical supervision are found the child is at once sent to his family physician for treatment and advice. One local physician while examining at one of these Summer Round-ups found a little chap markedly underweight, with a bad heart, which condition in his judgment, was due to diseased tonsils. That the doctor's opinion was right, was proved by the fact that since tonsileectomy the child has gained 6 pounds in weight, and the heart condition is clearing up.

Another point stressed in the campaign is the education of parents to the necessity of caring for the teeth of young children. How can Johnny masticate his food sufficiently if his baby molars are crumbling from decay? The permanent teeth have not been given a sporting chance of erupting in healthy condition, if the first teeth are uncared for. It is as important to the future health of the child to keep these under the supervision of a dentist as it is to keep up a periodical supervision of the rest of the body.

Progress

An attempted report at this point of the work of the Summer Round-ups would be premature as we are still in the midst of these activities. Many local Parent and Teacher Organiza-

tions expressed the wish to begin the work in May; others followed in June, while still others are coming on in July and August.

Good work has been done thus far. One community with a registration of 35 children to enter school for the first time this fall rounded up 33 for examination. Another group can claim the examination of every registered child, or 100 per cent. Every variety of childish limitations are being found and their correction is being brought about by the follow-up work of the local nurses. In one town, where the registration was 60 and where the resident doctor, a health officer by the way, was examining, 20 children were brought in. The doctor became so interested he asked that a day might be given the following week when the remaining children could be rounded up. Another doctor, also a health officer, while examining found one of his own patients with an unsuspected deviation of the spine and at once reported it to a specialist. "What a splendid thing this work is for all concerned" were the concluding remarks of this doctor.

Importance of the Work

School is no place for an ailing child or one handicapped by some correctable defect. Just here during this preschool period we should study the needs of the little bodies and do our part toward freeing them from all handicaps. The foundation of our civilization is being built upon the health and sensible upbringing of our children. We hear so much these days of Americanization. How can the work be better done than by getting our children physically fit to cope with the problems of the future.

"The Health of the Child is the Strength of the Nation"

SOCIAL HYGIENE*

By Daniel E. Shea

Before giving my talk on social hygiene this morning, I wish to quote to my listeners, an abstract of the radio talk given over WGY by Mrs. Frederick M. Hosmer, President of the New York State Congress of Parents and Teachers.

Because of the importance of social hygiene, Mrs. Hosmer states that this year their association is introducing a special educational program in social hygiene, and is glad to have this opportunity to enlist the aid of the mothers of the State of New York on this phase of child health education.

The following is a quotation as to just what the New York State Congress of Parents and Teachers think of the young people of today.

"We believe that the youths of the present time are inherently good. That they have a strong desire, in fact, that they have an impelling determination to be successful socially and commercially and finally that these adolescents are ready and willing to face facts. They want to know how to live in order that they may get the most out of life. They are prepared and willing to live in accordance with the laws of health and social conventions if they can be shown definitely how such living will insure the greatest possible success and happiness. Because we believe in these children and because we believe that their greatest need is for such education as will prepare them for complete living, for parenthood, we are making an earnest effort to give them this information which they desire.

"To be sure our fathers and mothers did not talk to us about parenthood. It was not the custom in those days and little was said or written about social hygiene but times have changed. Young people are hearing about these things; they have a normal curiosity to know more. Children cannot be kept ignorant; they are bound to get information regarding this great instinct in life which leads to parenthood. The only choice left to parents and guardians is whether they shall first receive this information from a clean and wholesome source or from a profane and vulgar source. The story of life is a wonderful story and can be told in a simple way even to very young children."

*Radio Talk Broadcast over WTIC.

Need For Proper Understanding of Sex

There has been a disposition on the part of some to criticize unduly parents of this and past generations for the failure to give proper and sane instructions to their children. They have been confronted with the problem as important and yet as difficult of handling as any that human beings have been called upon to solve. In the main they have been forced to handle it single handed, frankly realizing their limitations yet knowing not whither to turn for aid.

It is indeed an exceptional parent who does not desire to build for his or her child as firm and as sound a foundation as possible, and yet mothers and fathers in the past have not fully equipped their children with the essential facts regarding sex. This is not due to their lack of active interest in the future of their children, but rather to a misunderstanding on their part as to the vital importance of starting children out in life with a healthy attitude toward these matters.

In a recent survey among 1,000 college men regarding sex experience in childhood, only four per cent received true information from their parents. Eighty-five per cent secured their information from older companions before they had reached the age of twelve years. Some of this latter group had received this information as early as the age of five, the average being 9.6 years. Seventy-nine per cent stated that their first sex information was harmful.

It is of course no longer a question whether boys and girls should receive information regarding the essential facts governing life. The problem of today is—How shall the information be imparted and not—Shall it be imparted? Shall it be imparted to them properly in the home or shall we continue to let the child gather whatever truths possible from the unreliable and distorted gossip of older companions? Shall we depend upon lurid pictures and other sources of information that many times lead to serious consequences?

It is not contended that the imparting of this imformation will of itself alone result in the complete elimination of the venereal diseases nor will it of itself insure ideal morals. Yet it is an important and fundamental step in the right direction which all parents must take before they can feel that they have performed their duty in the safe-guarding of their boys and girls.

Danger Too Close To Be Avoided

In times of impending epidemic it becomes the duty of the health department to warn the citizens of the danger, and to advise them as to the measures necessary to control the disease.

This is a warning, for at the present time despite vigorous measures of repression, a contagious disease exists and records show that already many persons have been and are still becoming infected. Many under thirty years of age have been exposed to it as well as a large number of young women, and many little babies, are suffering from it. In the hospitals there are many cases resulting from these diseases, but the facts have been handled with such suppression of publicity, that little has leaked out to arouse the people.

The Connecticut State Department of Health believes it is time that the public should be informed and I hope that each housewife who is listening to me this morning will co-operate whole-heartedly, in order to protect her own family.

There are cases in your block or perhaps in your own apartment building, or boarding house. At your club, at your restaurant, and at the theatre that you attend in the evening, there are people who come from homes touched by the disease.

It is believed that there will be more victims of this contagion within the next year than were numbered in the United States casualty list during the entire war in France.

That is how serious our problem is. It is your problem and it is my problem, and that is why I am discarding the policy of silence and putting the facts of the situation before you listeners this morning. If you have a baby, a son leaving home for college, a daughter of high school age just stepping into womanhood or a healthy happy family, I know that you will be willing to co-operate with the health department to protect them; for, lurking behind the protecting screen of ignorance, fear, timidity, and false modesty, disease plays no favorites. The untaught young are all easy prey.

The pitiable feature of these diseases is that they attack not only the guilty, but the innocent. They bring misery into the home, and are often responsible for sterility, insanity, paralysis and other disasters.

Not Shall We— But How Shall We Inform

It is unfortunately true that your son and your daughter may be exposed to a contagious disease. If this disease were smallpox, would you tell them? The answer naturally is— Yes. Then why not impart to them the information on social diseases?

Do you believe that your son just entering college, even though the urge of life is beginning to be felt within him, would knowingly expose himself to a disease which may scar him, endanger his sanity, or ultimately kill him? He certainly would not if he fully realized the consequences. How can you

protect your children from this menace? Pal with your children, play with them, give them plain straight talks full of high ideals and sound standards of right and wrong. You have probably tried to teach them these ideals from infancy, but now, in addition, teach them the doctrine of self-preservation.

Teach your boy what it may mean to him to sow wild oats even once! Just once may be sufficient to raise a crop which must be harvested in anguish. If he is old enough, give him facts and figures and keep them before him. They are argument enough.

If your boy is still at the knee pants stage, or not yet out of rompers, you can do even better by teaching him such facts of life as will tend to prevent him from acquiring wrong thoughts about the origin of life; satisfy his curiosity by truthfully answering questions when they are asked, and give him a sane, wholesome, realistic attitude towards sex relations.

When he asks you how a baby is born, tell him of the bird in its cage, and the story of its nest and the eggs from which the little birds are to come. He accepts these facts so told without any unhealthy curiosity, almost casually, you will find. Children respond to any sane, wholesome story of the facts of life, and right knowledge is one of their best safeguards when they leave their mother's knee. So provide it instead of letting some ill-taught youngster be the teacher.

Every little girl is a potential mother. As soon as she is old enough to hold a toy she wants a doll. She loves her doll, and would rather play "mother" than any other game.

It is a simple matter to teach her, when she is of the age to understand, that the kind of a baby she is to have depends upon the kind of a mother she is and the kind of a father she chooses for it.

When your daughter knows that without any wrong doing on her part she may become a suffering invalid, that her children may be blind or defective in other ways, she will be less hasty in giving her love, and will take every precaution to see that the man she marries is as fit and clean physically as she.

Parents Should Pal With Their Children

Responsibility for this education must rest upon the shoulders of the parents and while the responsibility can not be shifted to other shoulders, other help may be called into requisition as, for example, the minister, the family physician, the social worker and the teacher. But in no case should the parent feel that he is himself free from the responsibility of this instruction.

The best time to give this instruction is when the little child first begins to ask questions concerning the things which go on about him; for instance, the question as to where did the baby come from? In times past it has been the custom to tell the child that the stork brought the little one, or to give him some other foolish story of its advent. The great difficulty with this story is that it is untrue, although the child accepts it unquestionably because it came from lips that had never deceived it. The child, deceived by such a story told by his mother , will not go to mother on subsequent occasions; instead, he will seek a playmate or older companion who fills his mind with misinformation and distorted views.

In place of arousing and encouraging the confidential relations which ought to exist between mother and child, the child has been told that which is false and which tends to destroy his trust in the one for whom he ought to feel the greatest devotion and loyalty.

Object lessons in plant life, in insect customs and habits, in the family concerns of the fish and birds and higher animals, will supply the opportunities desired for questions and answers that will come naturally and call for natural replies.

Help From the State

The Connecticut State Department of Health wishes very sincerely to be of assistance to you mothers in this matter and feels that material contained in literature distributed by this department will be helpful in outlining the matter of sex instruction and in simplifying the manner in which it may be imparted.

During the winter this department will have speakers who will give talks to Parent Teacher Organizations, Motherhood Clubs and other women's organizations when requested.

All requests for literature, moving pictures, or speakers should be addressed to the Connecticut State Department of Health, Hartford, Conn.

Vital Statistics

MONTH OF JUNE

TOTALS FOR FIRST SIX MONTHS OF THE YEAR 1927, 1926, 1925

	Births	Birth Rate*	Marriages	Mar. Rate*	Deaths	Death Rate*
1927	14,181	17.9±.1	5,624	7.1±.1	8,855	11.2±.1
1926	14,685	18.8±.1	5,671	7.2±.1	10,105	13.0±.1
1925	15,094	19.7±.1	5,805	7.6±.1	9,445	12.3±.1

*Rate on annual basis, per 1,000 population

Above are figures for the state and include all late reports received up to the closing of records for the current bulletin. As has been the case in the preceding months for no inconsiderable period, the births and birth rates are decreasing. Last month the accumulated rate was 17.8. The increase of 0.1 in the rate for the figures above is of no significance.

The marriages, it will be noted, run very closely for 1927 and 1926, the difference in rates being negligible. There has been some decrease with reference to 1925.

While the birth rate is decreasing and by that amount may be discouraging to those interested in a birth rate of at least 20 per 1000 population, the deaths and death rate are also decreasing for 1927 until the rate is very exceptionally low. The accumulated rate so far for 1927 is 11.2 and surpasses 1926 by 1.8 and 1925 by 1.1.

In actual numbers the deaths of 1927 are 1250 below 1926. However, it is far better to compare rates and the difference between the two years of 1.8 is truly astonishing. With the favorable half-year still to be experienced, it would seem almost certain, barring catastrophy, that 1927 is to be the record year in mortality.

The figures above show that the rate for 1926, first half year, was 13.0. At the end of the year the annual rate was 11.7, which is exactly 90 per cent of the half year rate. If 90 per cent of the 1927 rate is figured it will give a rate of about 10.1. It is hardly likely, however, that any such low rate will result when all the records for 1927 are in, but it does seem quite reasonable to hope that the low record of 11.3 established in 1924 will be surpassed.

Births

There were 2309 recorded births in the state during the month, 98 less than the 2407 reported in 1926 and 192 below the average (2501) for the past six years, 1927 included.

In commenting above on the total births so far this year it was noted that the birth rate was declining. The monthly rate, that is, of course, transferring the monthly number of births to an annual rate gives 17.5 for the rate which is the lowest to appear in the period 1922-1927. This rate is not quite as low as the 17.3 recorded in May.

Comparing towns over 5000 in population for the years 1927-1926 with respect to the increase of births gives the following list to include only such towns as had an increase of 10 or over:

East Hartford	11±7	Stamford	41±14
Greenwich	16±8	Stratford	12±6
Manchester	12±8	Torrington	11±8
Norwalk	11±10	Wallingford	11±5
Seymour	10±4	Watertown	7±4
	West Hartford 10±6		

The figures above are made up of two parts. First the actual increase and second the standard deviation due to chance which are preceded by the plus or minus sign ±. Any increase to be of noteworthy value must be at least twice its standard deviation. Applying this criterion shows that Greenwich, Seymour, Stamford especially, Stratford and Wallingford registered increases which were significant; that is to say, they were not increases of such a magnitude as might be expected to result from mere chance.

The most remarkable increase occurred in Stamford. The records in this city have shown fairly large fluctuation from month to month. However, as monthly figures are very apt to vary considerably no great importance should be attached thereto until confirmed by annual results.

For the month 88 stillbirths were reported and among a total number of births of 2397 the rate of stillbirths per 1000 total births was 36.7±4.1. In 1926 there were 91 stillbirths among 2498 total births, giving a rate of 36.4 per 1000 total births. Of course there is no appreciable difference in these rates.

The sex ratio of stillbirths was very interesting. Of the 88 stillbirths 58 were males and 30 females. This gives a sex ratio of 193 males to 100 females. The sex ratio is always—that is, in general it is always—decidedly in favor of the male; perhaps something like 130 or 140 to 100. The ratio of 193 to 100 is rather unusually high and will go to offset some earlier months of the year when the ratio was very low.

Deaths

Another very favorable month is on record for June. The deaths amount to 1215, which is 133 less than the 1348 reported for the month in 1926. The rate of 9.2 is the lowest in the last six years.

The average number of deaths, 1922-1927, is 1290. The current month is therefore 75 below the average.

Comparing 1927 with 1926 for certain causes of death gives the following table, showing increase or decrease:

Cause of Death	1927	1926	Increase	Decrease
Diseases of the heart	203±14	252±16	....	49±21
Epidemic Encephalitis	1± 1	0	1± 1	....
Pneumonia Undefined	1± 1	1± 1	....	....
Typhoid Fever	1± 1	1± 1	....	....
Measles	3± 2	10± 3	....	7± 3
Scarlet Fever	1± 1	1± 1	....	....
Whooping cough	2± 1	6± 2	....	4± 3
Diphtheria	13± 4	2± 1	11± 4	....
Influenza	11± 3	18± 4	....	7± 5
Tuberculosis, pulmonary	73± 9	97±10	....	24±13
Tuberculosis, other forms	12± 3	17± 4	....	5± 5
Cancer	129±11	128± 1	1±16	....
Cerebrospinal Meningitis	1± 1	1± 1	....	....
Poliomyelitis	0	0	....	....
Pneumonia, lobar	29± 5	42± 6	....	13± 8
Pneumonia, broncho	32± 6	37± 6	....	5± 8
Diarrhea and Enteritis Under 2	12± 3	5± 2	7± 4	....
Puerperal diseases	13± 4	14± 4	....	1± 5
Accident	77± 9	86± 9	....	9±13
Suicide	15± 4	19± 4	....	4± 6
Homicide	3± 2	7± 3	....	4± 3
Other Causes	583±24	604±25	....	21±34
Totals	1,215±35	1,348±37	20	153

Of the increases that due to diphtheria is the most significant. It is to be regretted that a disease so preventable as diphtheria should show a significant increase. However, it will emphasize the seriousness of the infection, which is so well known to all and yet about which so many neglect to take simple and absolutely positive preventive measures. In all the list of diseases there is none so unnecessary as diphtheria.

The increase of 7 in diarrhea and enteritis is on the borderland of significance.

Of the decreases, while the list is relatively long, only two are of apparent significance. The decrease in deaths due to diseases of the heart is of note. It is this cause of death upon which workers in Public Health are beginning to direct their work. The periodic health examination will bring results in lowering such deaths.

The other decrease of moment is in measles. Evidently there is no epidemic such as last year.

In regard to accidental deaths 17 were due to the automobile as compared with 26 in 1926.

FOR SIX YEARS—JUNE, 1927

CONNECTICUT	1922	1923	1924	1925	1926	1927
BIRTHS	2496	2564	2656	2574	2407	2309
Birth Rate	20.7	20.9	21.2	20.2	18.5	17.5
MARRIAGES	1691	2062	1950	1868	1876	1871
Marriage Rate	14.0	16.8	15.6	14.7	14.4	14.2
DEATHS	1175	1314	1298	1391	1348	1215
Death Rate	9.7	10.7	10.4	10.9	10.4	9.2
COMMUNICABLE DIS.* DEATHS	150	144	150	140	136	105
Per Cent to Total Deaths	12.7	11.0	11.6	10.0	10.1	8.6
DEATHS UNDER 1 YEAR	153	187	162	132	154	110
Rate Per 1,000 Births	57.9	72.8	61.2	53.2	64.0	46.0

*Includes Typhoid Fever, Measles, Scarlet Fever, Whooping Cough, Diphtheria, Tuberculosis Pulmonary, Cerebrospinal Meningitis, Poliomyelitis, Influenza.

Statistics
June, 1927

	Population Est. as of July 1, 1927 Based on U. S. Census	TOTALS				DEATH RATES			AGE GROUPS		
		Births	Stillbirths	Marriages	Deaths	All Causes (per 1,000 population)	Tuberculosis (per 1,000 population)	Children under 1 year (per 1,000 births)	Under 1 year	1 to 5 years	65 years and over
State of Connecticut	**1,586,435**	**2309**	**88**	**1871**	**1215**	**9.2**	**0.6**	**46.0**	**110**	**31**	**453**
Ansonia	19,548	22	1	27	19	11.7	0.6	.....	.....	.....	3
Branford	7,073	10	.....	7	5	8.5	.....	.....	.....	.....	1
Bridgeport	174,890	224	8	198	93	6.4	0.2	27.5	7	3	26
Bristol	26,087	46	1	25	29	13.3	1.4	71.0	4	1	15
Danbury	21,931	37	1	35	23	12.6	1.1	114.5	5	.....	10
Derby	12,963	14	3	16	8	7.4	.....	.....	.....	.....	2
East Hartford	14,311	28	.....	15	16	13.4	.....	.....	.....	2	4
Enfield	13,241	24	.....	28	6	5.4	.....	.....	.....	.....	3
Fairfield	15,541	17	1	12	9	6.9	0.8	89.6	1	.....	1
Glastonbury	6,206	5	2	8	5	9.7	.....	.....	.....	.....	3
Greenwich	26,373	44	3	81	22	10.0	0.5	23.7	1	.....	7
Groton	11,326	12	.....	8	10	10.6	.....	.....	.....	.....	6
Hamden	10,718	14	.....	12	10	11.2	1.1	.....	.....	1	3
Hartford	168,258	279	16	233	141	10.1	0.6	58.0	20	4	45
Killingly	9,384	13	1	13	8	10.2	.....	70.0	1	.....	5
Manchester	21,992	40	.....	23	17	9.3	0.5	.....	.....	.....	8
Meriden	36,807	48	2	41	24	7.8	0.7	34.2	2	.....	11
Middletown	22,932	23	1	22	20	10.5	0.5	41.7	2	.....	7
Milford	14,673	10	1	15	2	1.6	.....	.....	.....	.....	1
Naugatuck	16,829	20	.....	13	11	7.8	0.7	.....	.....	.....	4
New Britain	71,068	108	3	69	37	6.2	0.5	45.9	6	.....	12
New Haven	184,727	262	11	247	121	7.9	0.9	22.6	7	3	34
New London	30,149	36	3	36	23	9.2	0.4	75.5	5	.....	4
Norwalk	30,173	53	5	43	23	9.1	0.8	35.3	2	.....	7
Norwich	30,689	57	3	46	29	11.3	0.8	64.3	4	4	11
Plainfield	8,818	7	.....	11	11	15.0	1.4	93.0	1	.....	3
Plainville	5,064	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
Plymouth	6,459	8	.....	8	3	5.6	.....	.....	.....	.....	2
Putnam	9,220	11	1	15	6	7.8	.....	.....	.....	.....	2
Seymour	8,321	12	.....	6	10	14.4	.....	136.4	1	.....	2
Shelton	11,699	15	.....	7	7	7.2	.....	.....	.....	.....	5
Southington	9,925	13	1	13	9	10.9	.....	69.8	1	.....	5
Stafford	5,472	11	.....	9	2	4.4	.....	64.2	1	.....	1
Stamford	48,515	123	4	90	50	12.4	0.5	75.3	7	1	21
Stonington	11,041	14	.....	10	2	2.2	.....	.....	.....	.....	.....
Stratford	17,451	26	.....	6	6	4.1	.....	70.2	1	1	2
Thompson	5,226	11	1	5	6	13.8	2.3	.....	.....	.....	4
Torrington	25,316	36	2	33	17	8.1	1.4	.....	.....	.....	4
Vernon	8,751	10	.....	9	5	6.9	.....	76.4	1	.....	1
Wallingford	12,659	19	.....	11	13	12.3	0.9	.....	.....	.....	7
Waterbury	105,960	156	2	101	88	10.0	0.5	59.1	11	3	32
Watertown	7,506	13	1	5	9	14.4	.....	455.6	3	.....	3
West Hartford	11,908	25	1	21	10	10.1	.....	213.0	3	1	2
West Haven	18,834	29	1	28	16	10.2	.....	32.6	1	.....	8
Westport	5,772	6	.....	5	3	6.2	.....	.....	.....	2	.....
Wethersfield	5,264	11	.....	5	3	6.8	.....	.....	.....	.....	2
Winchester	9,104	.....	.....	.....	2	2.6	.....	.....	.....	.....	1
Windham	14,418	29	1	20	9	7.5	.....	80.8	2	.....	4
Windsor	6,732	10	.....	1	5	8.9	.....	.....	.....	1	1
Towns under 5,000	209,106	235	7	179	187	10.7	0.6	51.6	10	3	98
Other States	.....	30	.....	.....	25	.....	.....	.....	.....	1	10

DEATHS FROM IMPORTANT CAUSES

Diseases of the Heart	Encephalitis Epidemic	Pneumonia Undefined	Typhoid Fever	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Influenza	Tuberculosis-Pulmonary	Tuberculosis Other forms	Cancer	Meningitis-Cerebrospinal	Poliomyelitis	Pneumonia—Lobar	Pneumonia—Broncho	Diarrhoea-Enteritis Under 2	Puerperal Diseases	Accident	Suicide	Homicide	Institutional Deaths	Non-resident Deaths
203	1	1	1	3	1	2	13	11	73	12	129	1	.....	29	32	12	13	77	15	3	463	
2	.....	.....	.....	.....	.....	.....	.....	1	1	.....	3	.....	.....	.....	.....	.....	.....	1	.....	.....	6	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....	.....	2	.....
13	1	.....	.....	.....	.....	.....	1	1	3	1	14	.....	.....	3	4	.....	.....	3	1	1	40	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	1	.....	.....	1	.....	.....	.....	.....	.....	.....	10	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	1	.....	.....	1	2	1	1	1	.....	.....	8	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	3	.....	.....	3	.....
5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	1	1	.....	7	.....
1	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	4	1	.....	7	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	1	.....	.....	6	.....
1	.....	.....	.....	.....	.....	.....	1	.....	1	1	1	.....	.....	.....	1	.....	.....	.....	.....	.....	4	.....
30	.....	.....	1	1	.....	.....	2	.....	8	3	9	.....	.....	3	8	5	.....	10	.....	.....	78	.....
6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
5	.....	.....	.....	.....	.....	.....	1	1	1	.....	1	.....	.....	.....	.....	.....	1	.....	.....	.....	4	.....
3	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	7	.....	.....	.....	1	.....	.....	2	.....	.....	5	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	1	1	4	.....	.....	1	.....	.....	.....	2	.....	.....	7	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	1	.....	.....	1	.....	.....	.....	.....	.....	.....	2	.....
3	.....	.....	.....	.....	.....	.....	.....	1	3	1	5	.....	.....	4	1	1	1	3	3	.....	18	.....
16	.....	.....	.....	.....	.....	.....	.....	2	14	.....	12	.....	.....	5	4	.....	2	3	2	.....	53	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	1	1	5	1	.....	1	1	.....	.....	.....	.....	.....	10	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	2	.....	.....	1	.....	.....	.....	3	.....	1	9	.....
5	.....	.....	.....	.....	.....	.....	1	.....	2	1	.....	.....	.....	.....	1	.....	.....	1	2	.....	5	.....
4	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	3	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....
1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	.....
1	.....	.....	.....	.....	.....	.....	4	.....	.....	.....	1	.....	.....	.....	1	.....	.....	.....	.....	.....	2	.....
3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....
4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....
7	.....	.....	.....	1	.....	.....	.....	.....	2	.....	5	.....	.....	1	.....	.....	.....	2	1	.....	14	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1	.....	.....	.....	1	.....	.....	.....	.....	.....	2	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....	2	.....	.....	.....	.....	.....	.....	1	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	2	1	1	6	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....	1	.....	1	.....	.....	4	.....
4	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	3	.....	.....	1	.....	.....	.....	.....	.....	.....	4	.....
8	.....	.....	.....	1	.....	.....	.....	1	5	.....	8	.....	.....	1	.....	1	2	9	3	.....	34	.....
2	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....
3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	2	1	.....	.....	.....	.....	5	.....
5	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	2	.....	.....	.....	1	.....	3	1	.....	.....	8	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....
3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1	.....	.....	.....	.....	.....	2	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
36	.....	1	.....	.....	.....	2	2	1	10	.....	23	.....	.....	2	2	2	3	16	.....	.....	56	.....
7	.....	.....	.....	.....	.....	.....	.....	.....	3	2	2	.....	.....	.....	.....	.....	.....	1	.....	.....	12	.....

Laboratories

SUMMARY OF BUREAU ACTIVITIES
JULY, 1927

DIAGNOSTIC

	+	—	?	Unclassified	Total	
Typhoid	2	246	2	....	250	
Paratyphoid A	....	250	....	....	250	
Paratyphoid B	....	250	....	....	250	
Diphtheria	68	863	....	....	931	
Diphtheria Virulence	9	29	....	....	38	
Vincent's Angina	1	557	....	....	558	
Hemolytic Streptococci	12	546	....	....	558	
Tuberculosis	28	201	....	....	229	
Syphilis	399	1,770	135	....	2,304	
Gonorrhoea	27	78	....	....	105	
Malaria	....	1	....	....	1	
Rabies	4	5	....	....	9	
Glanders	....	1	....	....	1	
Special Specimens	3	6	....	64	73	5,557

CHEMICAL AND BACTERIOLOGICAL

Milk samples	290	
Water samples	400	
Clinical thermometers	271	961
Total examinations made		6518

Busiest July in History of Laboratories

The Laboratories have started off on the first month of the new fiscal year at a rate far in excess of all expectations. The month of July, 1927 shows a total of laboratory examinations more than twice that of any July prior to two years ago, with an increase in total examinations of 43 per cent over last July and of 53 per cent above July two years ago.

The Laboratories made less milk examinations than for any corresponding month for several years. An increased demand for milk examinations following the milk survey of last summer is now falling off.

Diphtheria examinations are more than twice, and other diagnostic examinations are from two to three times greater than for any previous July. Part but not all of this additional work results from the monthly examinations of all handlers of certified milk.

Those in charge of the laboratory policies are seriously concerned because more demands are now being made for laboratory examinations by health officers and physicians than was anticipated when the budget was planned for the new fiscal year.

Preventable Diseases

INCIDENCE OF DISEASE FOR MONTH OF JULY, 1927

(As compared with previous years)

A comparison of the daily morbidity reports received during the month of July, 1927, with the corresponding month for the years 1922, 1923, 1924, 1925 and 1926.

DISEASE	Average 1922-1926 for July	Mean 1922-1926 for July	1922	1923	1924	1925	1926	1927
Cerebrospinal Meningitis ..	5	5	6	9	5	2	2	4
Diphtheria	99	111	111	127	132	80	47	77
Encephalitis Epidemic	4	3	3	7	3	4	2	....
Measles	355	358	502	258	261	358	394	131
Poliomyelitis	7	8	1	9	15	8	1	4
Scarlet Fever	103	115	80	115	123	75	121	85
Smallpox	8	....	11	....	27	....	....	....
Typhoid Fever	30	24	63	28	24	17	20	9
Tuberculosis Pulmonary	132	133	143	133	142	111	129	196
Whooping Cough	252	212	201	289	212	410	146	113

A comparison of the morbidity on these diseases for the two preceding months, May and June with the July record is as follows:

	May	June	July
Cerebrospinal Meningitis	3	4	4
Diphtheria	103	138	77
Encephalitis Epidemic	1	4	....
Measles	215	252	131
Poliomyelitis	1	1	4
Scarlet Fever	390	277	85
Smallpox	....	....	....
Typhoid Fever	2	5	9
Tuberculosis Pulmonary	141	150	196
Whooping Cough	163	98	113

Cases of Other Reportable Diseases

Chickenpox	157	Tetanus	3
German Measles	9	Gonorrhoea	74
Influenza	5	Syphilis	88
Mumps	59		
Septic Sore Throat	3	Total	398

Cases of Occupational Diseases

Eczema	2	Toxic Dermatitis	6
Fulminate of Mercury Dermatitis, fingers	3	Total	11

Cases of Certain Reportable Diseases

July, 1927

	Population Est. as of July 1, 1927	Typhoid Fever	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Meningitis Cerebrospinal	Poliomyelitis	Pulmonary Tuberculosis	Other Forms Tuberculosis	Pneumonia Lobar	Broncho-Pneumonia	Other Com. Diseases
State Total	**1,586,435**	**9**	**131**	**85**	**113**	**77**	**4**	**4**	**196**	**14**	**41**	**48**	**398**
NEW HAVEN CO.	**475,419**	**1**	**34**	**15**	**25**	**16**	.....	**1**	**93**	**7**	**5**	**9**	**118**
New Haven	184,727	.....	29	1	11	1	.....	1	64	4	1	3	67
Waterbury	105,960	.....	4	5	1	1	.....	.....	13	2	1	3	15
Meriden (city and town)	36,807	.....	.....	2	.....	2	.....	.....	4	.....	2	1	10
Ansonia	19,548	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
West Haven	18,834	1	.....	1	.....	3	.....	.....	10	.....	.....	2	11
Naugatuck	16,829	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1
Wallingford (town and boro)	12,659	.....	.....	2	.....	1	.....	.....	.....	.....	.....	.....	.....
Milford	14,673	.....	.....	1	2	.....	.....	.....	.....	.....	.....	.....	.....
Derby	12,963	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	2
Hamden	10,718	.....	1	2	2	3	.....	.....	1	1	1	.....	5
Branford (town and boro)	7,073	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Seymour	8,321	.....	.....	.....	6	3	.....	.....	.....	.....	.....	.....	.....
Towns under 5,000	26,307	.....	.....	1	2	2	.....	.....	.....	.....	.....	.....	6
FAIRFIELD CO.	**379,505**	**1**	**55**	**17**	**20**	**27**	.....	**2**	**33**	**1**	**10**	**7**	**74**
Bridgeport	174,890	1	.....	4	.....	16	.....	1	23	1	9	4	23
Stamford (city and town)	48,515	.....	5	6	3	1	.....	.....	2	.....	.....	.....	11
Norwalk	30,173	.....	.....	1	.....	.....	.....	.....	1	.....	.....	.....	1
Danbury (city and town)	21,921	.....	.....	2	2	2	.....	.....	3	.....	.....	.....	3
Greenwich (town and boro)	26,373	.....	50	.....	11	3	.....	.....	3	.....	.....	2	12
Stratford	17,451	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
Fairfield	15,541	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
Shelton	11,699	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
Westport	5,772	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Towns under 5,000	27,160	.....	.....	3	4	2	.....	1	1	.....	1	1	24
HARTFORD CO.	**402,344**	**2**	**16**	**28**	**33**	**19**	**3**	**1**	**49**	**6**	**14**	**25**	**72**
Hartford	168,258	1	5	14	18	6	2	1	30	3	7	16	23
New Britain	71,068	.....	4	3	2	2	1	.....	9	2	3	5	16
Bristol (city and town)	26,087	.....	1	7	6	3	.....	.....	4	1	.....	2	12
Manchester	21,992	.....	.....	.....	.....	6	.....	.....	.....	.....	.....	.....	5
Enfield	13,241	.....	.....	.....	2	1	.....	.....	1	.....	.....	.....	1
East Hartford	14,311	1	1	2	3	.....	.....	.....	3	.....	1	1	3
Southington (town and boro)	9,925	.....	1	1	.....	.....	.....	.....	1	.....	2	.....	3
West Hartford	11,908	.....	2	1	2	.....	.....	.....	.....	.....	1	.....	3
Windsor	6,732	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	1	4
Glastonbury	6,206	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
Wethersfield	5,264	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Plainville	5,064	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Towns under 5,000	42,288	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	2
NEW LONDON CO.	**114,930**	.....	.....	**12**	**7**	**6**	.....	.....	**10**	.....	**3**	**3**	**32**
Norwich (city and town)	30,689	.....	.....	3	.....	3	.....	.....	2	.....	.....	.....	1
New London	30,149	.....	.....	.....	6	.....	.....	.....	2	.....	.....	.....	9
Stonington (town and boro)	11,041	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	1
Groton (town and boro)	11,326	.....	.....	3	.....	.....	.....	.....	.....	.....	1	1	1
Towns under 5,000	31,725	.....	.....	4	1	3	.....	.....	6	.....	2	2	20
LITCHFIELD CO.	**80,900**	**2**	**2**	**3**	.....	**3**	.....	.....	**2**	.....	**1**	.....	**3**
Torrington (town and boro)	25,316	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
Winchester (inc. Winsted	9,106	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Plymouth	6,459	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Watertown	7,506	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Towns under 5,000	32,510	2	.....	3	.....	2	.....	.....	2	.....	1	.....	3
WINDHAM CO.	**56,258**	.....	**19**	**8**	**5**	**4**	**1**	.....	**2**	.....	**1**	.....	**16**
Windham (inc. Willimantic)	14,418	.....	.....	2	.....	1	.....	.....	1	.....	.....	.....	1
Putnam (city and town)	9,220	.....	.....	1	1	.....	.....	.....	1	.....	.....	.....	.....
Plainfield	8,818	.....	1	2	2	3	1	.....	.....	.....	.....	.....	3
Killingly (inc. Danielson)	5,226	.....	1	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Thompson	9,384	.....	.....	1	2	.....	.....	.....	.....	.....	1	.....	.....
Towns under 5,000	9,192	.....	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	12
MIDDLESEX CO.	**49,279**	**3**	**5**	**1**	**22**	**2**	.....	.....	**6**	.....	**6**	**4**	**79**
Middletown (city and town)	22,032	3	5	.....	20	.....	.....	.....	.....	.....	5	2	52
Middletown State Hospital	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	3
Towns under 5,000	26,347	.....	.....	1	2	2	.....	.....	3	.....	1	2	24
TOLLAND CO.	**27,800**	.....	.....	**1**	**1**	.....	.....	.....	**1**	.....	**1**	.....	**4**
Vernon (inc. Rockville)	8,751	.....	.....	.....	1	.....	.....	.....	1	.....	.....	.....	2
Stafford (town and boro)	5,472	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1
Towns under 5,000	13,577	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	1

State of Connecticut Health Bulletin

"For a Clean State and a Healthy People"

Vol. 41 SEPTEMBER, 1927 No. 9

This Issue Contains

Selecting Safe Shellfish Areas

News Notes From the Field

Births, Deaths and Marriages for July, 1927

Summary of Laboratory Activities for August, 1927

Incidence of Preventable Diseases for August, 1927

STANLEY H. OSBORN, M. D., C. P. H., Commissioner

ISSUED BY
State Department of Health
HARTFORD

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CONNECTICUT
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Vol. 41 September, 1927 No. 9
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STATE DEPARTMENT OF HEALTH

SELECTING SAFE SHELLFISH AREAS

By Warren E. Howland, S. B.,
Assistant Sanitary Engineer

During the summer of this year the study of possible pollution of shellfish areas has been continued. Further data have been collected for the establishment of lines within which shellfish may not be harvested for market purposes.

The data necessary for a complete understanding of the pollution of a given harvesting area would show the B. coli content of the water in the shellfish areas during every hour of the day under the various conditions of wind and at various seasons of the year. The ideal method of gathering such information would be to choose a large number of sampling points in the particular harbor under study and to collect samples of the water at these points at regular intervals throughout the complete tidal cycle (of about 12 hours) and to repeat this sampling under the several wind conditions and at all seasons of the year. Because of the length of time required it has been thought impossible to use this method and several shorter methods have been tried.

Methods of Investigation

One method consists in taking the samples on the ebb and again on the flood tides at a number of points along a route convenient for collecting the samples. In this way, the samples collected at chance stages of the tide represent various conditions and the B. coli contents of these samples give an indication of the average pollution of the water. This is the method used by the U. S. Public Health Service.

The principal method used this summer has been to determine the course and time taken by floats in passing from the sewer outfalls to the shellfish areas. By collecting samples

periodically in the vicinity of these floats as they pass down the harbors, the location of the polluted water at all stages of the tide has been determined.

The float studies have been useful in explaining why certain of the areas apparently safe have been found on repeated analyses to be polluted; they have furnished data as to the probable freshness and sources of the pollution; they have determined the boundary lines for harvesting in cases where the analytical data were inconclusive; taken in conjunction with the analyses they have helped to show how the B. coli content of the water varies throughout the day at a large number of points in the harbors studied.

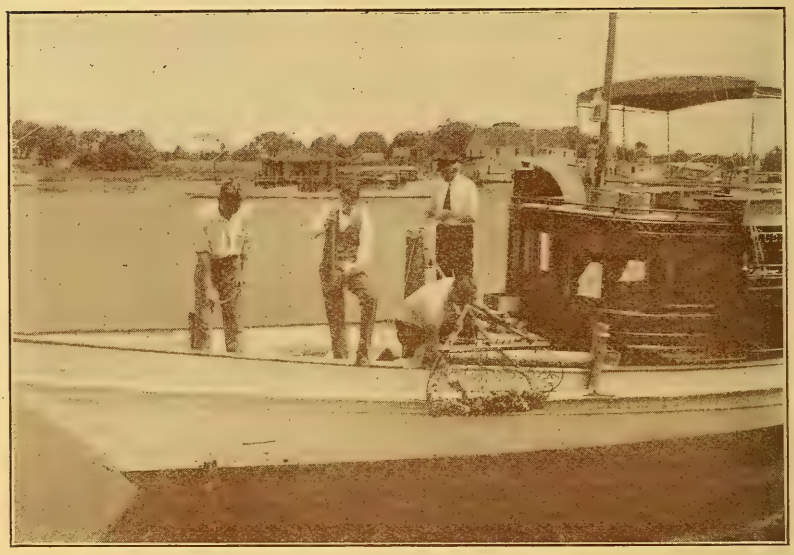

Figure 1. Field Operations on Oyster Boat "Lucile"

Collection of Samples

The samples have been collected and floats followed from the yacht "Lucile" owned by the Connecticut Shellfish Commission, who have cooperated with the State Department of Health in the work. This clipper-built yacht 60 ft. over all, 12 ft. beam and 4½ ft. draft as sailed by Captain B. L. Wright

has proved most satisfactory for the work. But for the skill and knowledge of the skipper it would doubtless have proven of too great a draft for maneuvering through the narrow passages between the rocks in getting to the sampling points and in following the floats.

Samples of shellfish were collected by means of the power dredge shown in the accompanying picture. Water samples, top and bottom, were collected with very useful sampling devices invented by Captain Wright. The bottom sampler has been described in the October 1925 bulletin of this Department.

Float Studies

The floats consist of columns of four bottles, held in place by small mesh chicken wire and made to float at the desired depth by adjusting the amount of air in the top bottles. Small indicating tags are attached to the tops of the floats. Captain Wright is responsible for this design. The floats travel with the current against the wind and numerous analyses have shown that they do follow the polluted water when used in accordance with the method described above.

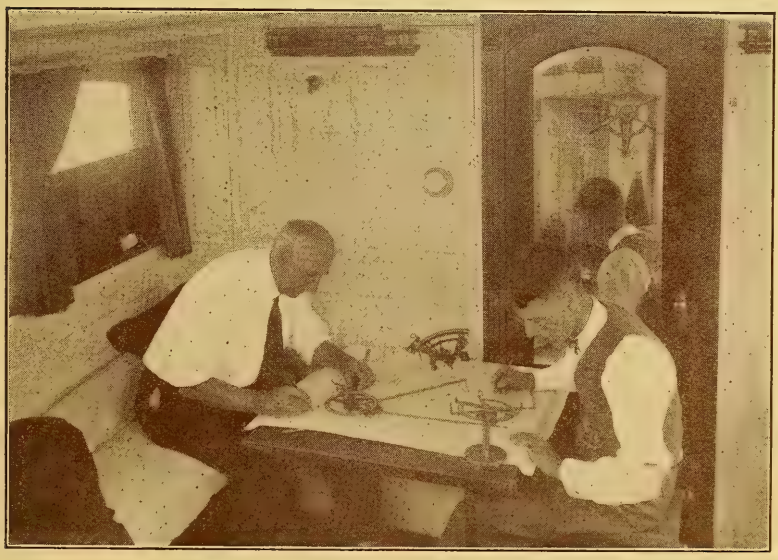

Figure. 2. Making Charts of Harbor Pollution in Cabin of Oyster Boat.

The locations of floats and of sampling points was accomplished by means of sextants and by a sighting protractor devised by Captain Wright. The positions were subsequently plotted on the maps by means of a three-armed protractor. These instuments are shown in Figure 2.

Figure 1 shows some of the field operations. The man at the left is lowering the bottom samples into the water, the next man has taken the top sample and is replacing the stopper, the man stooping is removing oysters from the dredge, six oysters being collected for each sample. The Captain, shown with one of the two sextants, has come from the pilot house to take the location. He will immediately return to the pilot house to change the position of the boat. The man who is taking the top samples will read and record the sextant angles, the time and temperature of the water and will mark the samples before the next samples are taken. The bottles for the float studies may be seen on the deck between the two figures at the left. Cans for holding the shellfish samples are on top of the pilot house. These cans together with the water samples will be sent to the Bureau of Laboratories of the State Department of Health for analysis.

The field investigations, including the collection of a large number of samples of water and shellfish, together with float studies, have been carried on by the Bureau of Sanitary Engineering of the State Department of Health, with the able cooperation of Captain Wright of the State Shellfish Commission.

NEWS NOTES FROM THE FIELD

Physicians Licensed

Bridgeport, Harshbarger, Isaac Long 144 Golden Hill St.
Turchik, Frank Bridgeport Hospital

Danbury, Delohery, Corneilius Leo 58 Main St.

East Haven, Brown, Paul Hemenway 67 Kimberly Ave.

Fairfield, Biehn, Sidney L. 640 Post Road

Farmington, Davies, John Archibald V. Farmington

Greenwich, Bonnell, Clarence Hornbeck 80 Putnam Ave. West.
Hart, Henry Harper Blythewood, Greenwich.

Hartford, Brewer, Timothy Francis 211 Church Street
Crimm, Paul Dearth Cedarcrest, Hartford.
Tietze, Samuel 495 Windsor Ave.

Meriden, Caplan, Henry Meriden Hospital

Middletown, Magnano, Joseph 42-44 Center Street

New Britain, Slysz, Ladislaus Bernard New Britain General Hospital

New Haven, Flynn, Harold A. 953 Elm Street
Freiheit, John Martin New Haven General Hospital
Roberts, Frederick William 31 Dwight Street
Wilshusen, Herbert Frank 598 George Street

Norwalk, Sargent, Charles Douglas 91 West Avenue

Orange, Savarese, Melchiorre Francesco Rosario Derby Ave., Box 41-a

Southington, McNerney, John Cornelius (Plantsville)

Sharon, Bigelow, Nelson Sylvester Sharon
Somers, Elbert Mortimer Sharon

Stamford, Bissell, Addison Hayes 43 Chesterfield Road

Waterbury, Morrill, Harold Frost 300 West Main St.

West Hartford, Filson, Ralph Marshall 64 S. Quaker Lane
Wallace, Charles Kenneth 940 Farmington Avenue

West Haven, Soper, Willard Burr William Wirt Winchester Hospital

Health Officers Appointed

Mr. M. Eugene Culver, Esq., County Health Officer of Middlesex County has announced the following appointments:

Donald J. MacGillivray, M. D., health officer of Portland, succeeding Dr. Philip D. Woodbridge who has recently left to join the staff of the Mayo Clinic in Minnesota.

T. P. Walsh, M. D., acting health officer of Durham succeeding the late Dr. E. A. Markam.

Middlesex County Health Officer, M. Eugene Culver, Esq., has appointed Dr. Irwin Granniss acting health officer of Westbrook.

J. Frederick Baker, Esq., Health Officer of New Haven County has appointed Mr. Willis N. Butrick of Orange health officer of Milford.

Hartford County Health Officer, Daniel H. Markham, Esq. has appointed Dr. Carl J. Kilburn acting health officer of Farmington.

Litchfield County Health Officer, William W. Bierce, Esq., has appointed Wallace E. Hoffman, M. D., health officer of of the town of Litchfield, succeeding W. E. Turkington, resigned.

Institutes and Conventions

Two important meetings for public health workers are to be held this fall.

The first is the fifth New England Health Institute, which is to be held at Providence, September 27-30.

The second is the Fifty- Sixth Annual Meeting of the American Public Health Association which is to be held at Cincinnati, Ohio, October 17-21.

Approved Laboratories

The Bureau of Laboratories of the New Haven City Health Department, an approved laboratory of this department, has been moved to new and enlarged quarters at 405 Orange St., New Haven. The new location has the distinct advantage, in addition to being centrally located, of placing the laboratories on the ground floor where they will be of ready access to physicians.

Five certificates have been issued by the State Department of Health to hospitals placing the hospital laboratory on the list of approved laboratories of this department:

Manchester Memorial Hospital Laboratory under direction of Ralph E. Kendall, M. D.

Hall-Wilson Laboratory of the Hartford Hospital under direction of Wilmar M. Allen, M. D.

Laboratory of W. W. Backus Hospital, Norwich under the direction of John A. Ferguson, M. D.

Stamford Hospital Laboratory under direction of Bruce S. Weaver, M. D.

Griffin Hospital Laboratory under the direction of Dr. C. J. Bartlett who has been employed as Pathologist.

Vital Statistics

MONTH OF JULY

TOTALS FOR FIRST SEVEN MONTHS OF THE YEAR, 1927, 1926, 1925

Year	Births	Birth Rate*	Marriages	Mar. Rate*	Deaths	Death Rate*
1927	16,513	17.8±.1	6437	6.9±.1	10,132	10.9
1926	17,318	19.0±.1	6627	7.2±.1	11,441	12.5
1925	17,729	19.7±.1	6660	7.4±.1	10,659	11.8

*Rate on annual basis, per 1,000 population

The above figures show the accumulated totals for the past three years.

It will be immediately apparent that there is a great reduction in birth rate. Last month the accumulated rate was 17.9 and this has been decreased by 0.1 of a point. Such a decrease as is indicated for 1927 with respect to 1926 cannot be accounted for as a mere chance reduction. The decrease is 1.2 points whereas a decrease of about 0.2 point might have been expected from pure chance.

The marriage rate is also decreasing and this will in part account for the decrease in births. However, the decrease in marriages, 1927 to 1926, is about 200 and the decrease in births is very nearly 800.

The most encouraging figures above are those for the death rates. The rate of 10.9 for the first seven months is extraordinarily low. In actual numbers, this year is 1309 deaths below 1926.

Births

Reports of 2332 births received during the month, giving a rate of 17.7 per 1,000 of the population. This is a low rate, but not as low as the 17.5 which appeared for June. Late reports will somewhat increase the number of births and therefore increase the birth rate slightly.

Examination of the birth rate for the last six years will show a rather erratic series. The average rate is 21.05 and the scatter about the mean as indicated by the standard deviation is 1.8. This is a large dispersion relative to the series for death rates in which the average rate is 9.8 and the scatter is about .3.

Comparing towns in which there were more births in 1927 than in 1926 and limiting the comparison to towns over 5,000 will give the following table:

Ansonia	10 ± 6	Stratford	14 ± 6
East Hartford	29 ± 7	West Hartford	26 ± 7
Hamden	11 ± 7	Towns under 5,000 pop.	77 ± 21

The list above includes only towns in which there was an increase of 10 or more. The increases for East Hartford and West Hartford are of note as is also the increase for the group of towns making up the list of towns under 5,000 in population. No doubt these increases are accounted for by the allocation of births. For statistical purposes, births are being recorded by the residence of the mother. We should therefore expect the smaller towns to gain at the expense of the larger. For example, Hartford shows an apparent decrease of 74 births, Bridgeport a decrease of 35 and New Haven a decrease of 52. Many of these births are now being counted in the town of residence of the mother.

Records of 72 stillbirths were recorded. There were 77 in 1926. The 72 give a rate of very nearly 30.00 per 1,000 total births. The rate last year was 30.41 per 1,000 total births. The change is of no moment.

The sex distribution of this year's 72 was female 29, male 43, giving a sex ratio of 148 males to 100 females. This is about the usual experience. Last month the ratio was 193 males to 100 females and was very high.

Deaths

The deaths during the month numbered 1277 as compared with 1336 in 1926, a decrease of 59. The death rate is 9.7 per 1,000 population and while this is not the lowest rate to appear in the last six years still it is a low rate. The lowest rate since 1922 is 9.5 in 1925. The highest rate in the same period is 10.3 in 1926.

July is a month of relative stability and uniformity. It is a healthy month. The rate is quite generally low and there is small standard deviation as mentioned earlier in this article.

Comparing 1927 and 1926 with respect to certain diseases gives the following table:

Cause of Death	1927	1926	Increase	Decrease
Diseases of the heart	216±15	214±15	2±21	....
Epidemic encephalitis	0	2±1	....	2±1
Pneumonia, undefined	1±1	0	1±1	....
Typhoid Fever	1±1	2±1	....	1±2
Measles	2±1	6±2	....	4±3
Scarlet Fever	0	3±2	....	3±2
Whooping Cough	0	5±2	....	5±2
Diphtheria	5±2	2±1	3±3	....
Influenza	10±3	7±3	3±4	....
Tuberculosis, pulmonary	68±8	67±8	1±12	....
Tuberculosis, other forms	13±4	13±4	....	....
Cancer	130±11	139±12	....	9±16
Poliomyelitis	0	0	....	....
Cerebrospinal meningitis	3±2	0	3±2	....
Pneumonia, Lobar	26±5	27±5	....	1±7
Pneumonia, Broncho	28±5	23±5	5±7	....
Diarrhea and Enteritis under 2	17±4	19±4	....	2±6
Puerperal diseases	9±3	17±4	....	8±5
Accident	91±10	125±11	....	34±15
Suicide	20±4	16±4	4±6	....
Homicide	2±1	6±2	....	4±3
Other causes	635±25	643±26	....	8±36
Totals	1277±36	1336±36	22	81

There is no increase of any significance. The decreases for whooping cough and accidental death are of significance. Of the accidental deaths 29 were due to the automobile. In 1926 there were 28 such deaths.

The month also took its toll in accidental drownings, there being 20.

FOR SIX YEARS—JULY, 1927

CONNECTICUT	1922	1923	1924	1925	1926	1927
BIRTHS	2717	2741	2859	2635	2633	2332
Birth Rate	22.5	22.3	22.8	20.7	20.3	17.7
MARRIAGES	863	970	952	855	956	813
Marriage Rate	7.2	7.9	7.6	6.7	7.4	6.1
DEATHS	1208	1200	1199	1214	1336	1277
Death Rate	10.0	9.8	9.6	9.5	10.3	9.7
COMMUNICABLE DIS.* DEATHS	127	119	109	111	102	89
Per Cent to Total Deaths	10.5	9.9	9.2	9.1	7.6	7.0
DEATHS UNDER 1 YEAR	183	142	149	115	135	130
Rate Per 1,000 Births	69.2	55.3	56.2	46.3	56.1	72.0

*Includes Typhoid Fever, Measles, Scarlet Fever, Whooping Cough, Diphtheria, Tuberculosis Pulmonary, Cerebrospinal Meningitis, Poliomyelitis, Influenza.

Births, Marriages and Deaths

Statistics July, 1927

	Population Est. as of July 1, 1927 Based on U. S. Census	TOTALS				DEATH RATES			AGE GROUPS		
		Births	Stillbirths	Marriages	Deaths	All Causes (per 1,000 population)	Tuberculosis (per 1,000 population)	Children under 1 year (per 1,000 births)	Under 1 year	1 to 5 years	65 years and over
State of Connecticut	**1,586,435**	**2332**	**72**	**813**	**1277**	**9.7**	**0.6**	**72.0**	**130**	**39**	**471**
Ansonia	19,548	22	.....	7	25	15.3	0.6	104.8	2	.....	8
Branford	7,073	12	.....	1	4	6.8	.....	.....	.....	.....	2
Bridgeport	174,890	223	11	68	110	7.5	0.7	20.0	5	6	35
Bristol	26,087	55	.....	15	13	6.0	.....	35.1	2	3	7
Danbury	21,931	31	2	11	30	16.4	1.6	92.0	4	.....	11
Derby	12,963	18	2	10	11	10.2	2.8	58.2	2	.....	3
East Hartford	14,311	36	.....	4	11	9.2	.....	.....	.....	1	6
Enfield	13,241	20	.....	13	11	10.0	.....	195.2	4	1	5
Fairfield	15,541	23	.....	2	12	9.3	2.3	.....	.....	.....	3
Glastonbury	6,206	10	.....	2	9	17.4	.....	166.7	1	.....	3
Greenwich	26,373	31	1	39	15	6.8	0.9	47.4	2	.....	7
Groton	11,326	13	.....	7	4	4.2	.....	.....	.....	.....	2
Hamden	10,718	33	.....	5	8	9.0	1.1	.....	.....	.....	6
Hartford	168,258	293	13	61	146	10.4	0.8	69.6	23	2	38
Killingly	9,384	12	.....	6	13	16.6	1.3	70.0	1	1	2
Manchester	21,992	29	.....	6	9	4.9	0.5	.....	.....	.....	2
Meriden	36,807	50	6	15	21	6.8	0.3	51.3	3	.....	8
Middletown	22,932	27	.....	13	17	8.9	0.5	.....	.....	1	5
Milford	14,673	13	1	6	12	9.8	.....	80.0	1	.....	6
Naugatuck	16,829	10	1	18	11	7.8	.....	100.0	1	3	2
New Britain	71,068	124	1	27	37	6.2	0.8	7.7	1	2	13
New Haven	184,727	266	8	109	141	9.2	0.6	54.4	17	6	43
New London	30,149	45	1	29	21	8.4	1.2	30.2	2	.....	6
Norwalk	30,173	52	1	18	30	11.9	0.4	70.6	4	1	15
Norwich	30,689	48	1	20	25	9.8	0.4	48.3	3	.....	11
Plainfield	8,818	16	.....	9	9	12.2	.....	186.6	2	2	3
Plainville	5,064	6	.....	2	1	2.4	.....	93.0	1	.....	.....
Plymouth	6,459	10	.....	5	5	9.3	.....	.....	.....	1	.....
Putnam	9,220	7	.....	10	6	7.8	.....	.....	.....	1	4
Seymour	8,321	5	.....	3	7	10.1	2.9	136.4	1	1	1
Shelton	11,699	10	.....	3	9	9.2	.....	.....	.....	.....	3
Southington	9,925	18	2	10	6	7.3	.....	69.8	1	.....	5
Stafford	5,472	11	2	6	7	15.4	.....	.....	.....	.....	6
Stamford	48,515	87	5	49	30	7.4	0.8	43.0	4	1	10
Stonington	11,041	17	.....	6	4	4.3	.....	93.8	1	.....	1
Stratford	17,451	23	1	3	9	6.2	.....	210.6	3	.....	2
Thompson	5,226	5	.....	2	3	6.9	2.3	.....	.....	.....	1
Torrington	25,316	33	.....	9	16	7.6	.....	49.4	2	.....	7
Vernon	8,751	17	.....	2	8	11.0	.....	.....	.....	.....	5
Wallingford	12,659	9	.....	.....	5	4.7	.....	.....	.....	.....	2
Waterbury	105,960	127	5	43	91	10.3	0.3	48.3	9	1	33
Watertown	7,506	8	.....	1	8	12.8	.....	.....	.....	.....	4
West Hartford	11,908	36	.....	4	17	17.1	.....	213.0	3	4	6
West Haven	18,834	43	.....	6	24	15.3	1.3	97.8	3	.....	3
Westport	5,772	3	.....	1	3	6.2	.....	.....	.....	.....	2
Wethersfield	5,264	7	.....	6	3	6.8	.....	.....	.....	.....	2
Winchester	9,104	10	1	8	9	11.9	.....	.....	.....	.....	5
Windham	14,418	22	1	14	6	5.0	.....	80.8	2	.....	2
Windsor	6,732	6	.....	3	4	7.1	.....	.....	.....	.....	.....
Towns under 5,000	209,106	268	6	96	196	11.2	0.4	93.6	18	1	92
Other States	.....	32	.....	.....	45	.....	.....	.....	2	.....	23

DEATHS FROM IMPORTANT CAUSES

Diseases of the Heart	Encephalitis Epidemic	Pneumonia Undefined	Typhoid Fever	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Influenza	Tuberculosis-Pulmonary	Tuberculosis Other forms	Cancer	Meningitis-Cerebrospinal	Poliomyelitis	Pneumonia—Lobar	Pneumonia—Broncho	Diarrhoea-Enteritis Under 2	Puerperal Diseases	Accident	Suicide	Homicide	Institutional Deaths	Non-resident Deaths
216		1	1	2			5	10	68	13	130	3		26	28	17	9	91	20	2	540	
3									1		1			2					1		12	
								1			1							1			1	
19		1	1				3	2	9	2	7	1		3	2	1		5	1		60	
2											2				2	1		1			6	
5									3		1				1		1				9	
									3									1			4	
2											2			2				1			4	
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4											1								1		3	
2									2									2			8	
1																					2	
2									1		3											
30								1	9	3	6			3	3	7	2	8	1		78	
1									1		1							4	1		4	
2									1		1										4	
2									1		6							3			5	
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5								1	2	3	3	1		1	1			2		1	20	
23									8	1	13			4	3		2	2	2		77	
5									3		2				2			1			9	
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12									2	1	18			1	2	1	2		2		35	
											2							1			4	
2								2			2			2		1	1	1	1		12	
6									3							1		4			9	
1																					1	
1																		1			3	
1											2				1			1		1	1	
											1					1		1			2	
											1							1			2	
27							1		8		22			4	5	1		26	4		62	
18							1		1	1	3										20	

Laboratories

SUMMARY OF BUREAU ACTIVITIES
AUGUST, 1927

DIAGNOSTIC

	+	—	?	Unclassified	Total	
Typhoid	4	319	5	....	328	
Paratyphoid A	....	328	....	....	328	
Paratyphoid B	1	327	....	....	328	
Diphtheria	65	874	....	....	939	
Diphtheria Virulence	2	23	....	....	25	
Vincent's Angina	....	529	....	....	529	
Hemolytic Streptococci	12	523	....	....	535	
Tuberculosis	20	175	....	....	195	
Syphilis	466	1900	134	....	2500	
Gonorrhoea	46	88	....	....	134	
Malaria	....	4	....	....	4	
Rabies	2	5	....	....	7	
Glanders	....	1	....	....	1	
Special Specimens	3	3	....	70	76	5,929

CHEMICAL AND BACTERIOLOGICAL

Milk samples	463	
Water samples	381	
Sewage	30	
Clinical thermometers	154	1,028
Total examinations made		6,957

Care in Shipping Specimens to Laboratory

During August 2500 laboratory examinations for syphilis were made. Thirty-one of these samples of blood were received broken. That is far too great a number. The laboratories are making a special effort to see that specimen bottles are carefully packed when sent out and the postal authorities of the state are cooperating to reduce breakage. Physicians are urged to be particularly careful in packing specimens, and to remind their local postmaster of the need for care in handling these packages which are specially marked FRAGILE AND PERISHABLE.

Beside breakage a total of 27 blood samples were hemolyzed or decomposed when they reached the laboratories and could not be examined. In most instances there appeared to be delay between the time of collecting the sample and the date it was postmarked at the place of mailing. A large number of these samples came from one hospital where specimens collected over a period of four or five days were tied together in one package.

We solicit the cooperation of physicians and hospital superintendents to assist us in reducing this number of unsatisfactory specimens.

Preventable Diseases

INCIDENCE OF DISEASE FOR MONTH OF AUGUST, 1927

A comparison of the daily morbidity reports received during the month of August, 1927, with the corresponding month for the years 1922, 1923, 1924, 1925 and 1926.

	Average 1922-1926 for August	Mean 1922-1926 for August	1922	1923	1924	1925	1926	1927
Cerebrospinal Meningitis ..	4	3	12	3	3	10	1	1
Diphtheria	85	91	97	124	64	91	50	82
Encephalitis Epidemic	4	5	6	5	1	5	1	3
Measles	92	114	131	114	47	38	121	42
Poliomyelitis	16	14	9	18	14	36	5	52
Scarlet Fever	73	71	66	87	71	81	53	38
Smallpox	3	12	1	12	....	1	....	....
Typhoid Fever	44	45	55	51	41	45	28	13
Tuberculosis Pulmonary	123	125	145	133	100	125	120	96
Whooping Cough	192	149	149	229	323	148	113	191

A comparison of the morbidity on these diseases for the two preceding months, June and July with the August record is as follows:

	June	July	August
Cerebrospinal Meningitis	4	4	1
Diphtheria	138	77	82
Encephalitis Epidemic	4	....	3
Measles	252	131	42
Poliomyelitis	1	4	52
Scarlet Fever	277	85	38
Smallpox	....	....	....
Typhoid Fever	5	9	13
Tuberculosis Pulmonary	150	196	96
Whooping Cough	98	113	191

Cases of Other Reportable Diseases

Chickenpox	50	Tetanus	3
German Measles	2	Chancroid	1
Influenza	5	Gonorrhoea	148
Malaria	6	Syphilis	243
Mumps	24		
Paratyphoid Fever	3	Total	490
Septic Sore Throat	5		

Cases of Occupational Diseases

Dermatitis, from Fulminate of Mercury	8	Dermatitis, from Gasoline	1
		Total	9

Cases of Certain Reportable Diseases

August, 1927	Population Est. as of July 1, 1927	Typhoid Fever	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Meningitis Cerebrospinal	Poliomyelitis	Pulmonary Tuberculosis	Other Forms Tuberculosis	Pneumonia Lobar	Broncho-Pneumonia	Other Com. Diseases
State Total	1,586,435	13	42	38	191	82	1	52	96	12	35	30	493
NEW HAVEN CO.	**475,419**	**2**	**19**	**8**	**36**	**18**		**11**	**32**	**1**	**10**	**8**	**117**
New Haven	184,727	1	13	1	29	2		3	8		2	4	67
Waterbury	105,960		2	2	2	2			14	1	8	2	27
Meriden (city and town)	36,807		2	2	1			1	4			1	4
Ansonia	19,548					3			3				5
West Haven	18,834	1	1		1	7		3	1			1	5
Naugatuck	16,829												
Wallingford (town and boro)	12,659							2					1
Milford	14,673												1
Derby	12,963			2		1							2
Hamden	10,718			1		2		1					2
Branford (town and boro)	7,073				1			1					1
Seymour	8,321												
Towns under 5,000	26,307		1		2	1			2				2
FAIRFIELD CO.	**379,505**	**4**	**9**	**11**	**6**	**25**		**6**	**21**	**2**	**10**	**4**	**77**
Bridgeport	174,890			4		19		3	12	2	8	3	29
Stamford (city and town)	48,515		5	2	3	2							5
Norwalk	30,173	3		1									8
Danbury (city and town)	21,921							1	2				20
Greenwich (town and boro)	26,373	1	4	1		2		1	4		1		4
Stratford	17,451												
Fairfield	15,541								1				1
Shelton	11,699			1							1		1
Westport	5,772							1					
Towns under 5,000	27,160			2	3	2			2			1	9
HARTFORD CO.	**402,344**	**3**	**5**	**10**	**68**	**21**	**1**	**23**	**34**	**8**	**7**	**13**	**206**
Hartford	168,258	1	2	2	52	2	1	3	19	2	3	7	134
New Britain	71,068		1	1	2	2		1	10	1	1	3	23
Bristol (city and town)	26,087	1	1	3	2	3		1	2	1	1		12
Manchester	21,992			1		6			1	2		2	9
Enfield	13,241				2	1		5	1				
East Hartford	14,311	1						3			1		6
Southington (town and boro)	9,925		1			1							2
West Hartford	11,908				6	3					1	1	4
Windsor	6,732							4					1
Glastonbury	6,206			1		3		1	1	2			5
Wethersfield	5,264												
Plainville	5,064												1
Towns under 5,000	42,288			2	4			5					9
NEW LONDON CO.	**114,930**	**2**	**1**	**5**	**9**	**7**		**8**	**1**	**1**	**3**	**1**	**22**
Norwich (city and town)	30,689	1		2		1		2					
New London	30,149			1	6			4	1	1	1	1	7
Stonington (town and boro)	11,041	1											1
Groton (town and boro)	11,326			1		3		1					1
Towns under 5,000	31,725		1	1	3	3		1			2		13
LITCHFIELD CO.	**80,900**				**6**	**2**		**1**					**5**
Torrington (town and boro)	25,316												
Winchester (inc. Winsted)	9,106												
Plymouth	6,459												
Watertown	7,506												
Towns under 5,000	32,510				6	2		1					5
WINDHAM CO.	**56,258**	**1**	**5**	**3**	**7**	**6**		**1**	**4**		**2**	**2**	**15**
Windham (inc. Willimantic)	14,418					1							4
Putnam (city and town)	9,220			2	1						1	1	
Plainfield	8,818							1					
Killingly (inc. Danielson)	9,384		2		1				4				10
Thompson	5,226			1		4							
Towns under 5,000	9,192	1	3		5	1					1	1	1
MIDDLESEX CO.	**49,279**		**3**	**1**	**23**	**3**		**2**	**4**		**2**		**42**
Middletown (city and town)	22,032		2		7						1		33
Middletown State Hospital									2				5
Towns under 5,000	26,347		1	1	16	3		2	2		1		4
TOLLAND CO.	**27,800**	**1**			**36**						**1**	**1**	**9**
Vernon (inc. Rockville)	8,751												
Stafford (town and boro)	5,472												
Towns under 5,000	13,577	1			36						1	1	9

State of Connecticut Health Bulletin

"For a Clean State and a Healthy People"

Vol. 41 **October, 1927** **No. 10**

This Issue Contains

Resume' of Eclectic Situation

The Vitamins

News Notes from the Field

Summary of Laboratory Activities for September, 1927

Births, Deaths and Marriages for August, 1927

Incidence of Preventable Diseases for September, 1927

STANLEY H. OSBORN, M. D., C. P. H., Commissioner

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CONNECTICUT STATE DEPARTMENT OF HEALTH
8 WASHINGTON STREET,
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CONNECTICUT

HEALTH BULLETIN

Vol. 41 October, 1927 No. 10

Issued Monthly by the

STATE DEPARTMENT OF HEALTH

RESUMÉ OF ECLECTIC SITUATION

Following the investigation of the Special Grand Jury, in 1923 and 1924:

Dec. 4, 1923	18	licenses	were	revoked
Dec. 14, 1923	7	"	"	"
Jan. 12, 1924	18	"	"	"
Feb. 1, 1924	124	"	"	"

making a total of 167 licenses to practice medicine and surgery in Connecticut revoked at the request of the Connecticut Eclectic Medical Examining Board. This board, in communications to the State Department of Health had asserted these licenses had been obtained through fraud or deceit or both.

Injunctions were served on the department by Maurice B. Burstan, Ralph DelGiudice, John Hraba and Albert Zweben, preventing the State Department of Health from revoking the licenses of these persons.

As a result of the Special Grand Jury investigations and before steps were taken to revoke any licenses, three were voluntarily returned to this office. The licenses of Peter K. Koraitis George M. Sutcliffe and Irva M. George are in the hands of the Grand Jury.

Twenty-two licenses were returned to the State Department of Health after they were revoked. The persons returning the licenses were:

Frank J. Beardsley
LeRoy Coombs,
*Aloysius J. Cregg
Donald S. Dade
*Nicholas A. Ferri
Alonzo Hobbs
Clarence Hobbs
Kin Jiro Hoshizaki
Morris Kaplan
*James Kelso
F. J. Killalee
J. E. Koplowitz
Wm. V. Koutsoumpas
Charles D. Rankin
Simon H. Slobins
Elizabeth A. C. Sprick
Donald W. Stewart
Boone J. Thomas
A. Vander Put
*Frank Webb
Paul D. Wesson
Fred H. Works

* later appealed

A total of 91 appeals have been filed following the revocations of these licenses. This includes the appeals filed by the persons who returned their licenses and also that filed by Robert P. Hammie, whose case was heard with this group although his license was revoked on January 9, 1923.

The cases of Gerald A. Richardson, Bernard I. Kafka, Isadore Yochelman, Harry Chaimson and Arnold H. Brein, were heard first. These cases were taken, after the hearing before Ex-Governor Holcomb at Hartford, through the Fairfield County Supreme Court, the State Supreme Court, and one, that of Arnold H. Brein, before the U. S. Supreme Court. This latter court dismissed the case in October, 1926, for lack of jurisdiction and ended the cases of these five men. They can no longer practice medicine in Connecticut.

In June, 1927 other cases of eclectic physicians who had appealed the revocation of their licenses came before the New Haven County Superior Court. These persons, listed below, all claimed graduation from the Kansas City College of Medicine and Surgery:

*Aronson, David K. 561 Main St., New Britain
*Bockman, James 121 Center St., Bethel
†Bush, James W. 33 Court St., New Britain
*DeJanis, Aurelius R. 5 White St., Danbury
Gavlas, Frank E. 1476 E. Main St., Bridgeport
Glass, Aaron 238 Davenport Ave., New Haven
†Goodwin, Allie J. Farmington Ave., Kensington
*J'Anthony, Michael M. 19 Main St., Torrington
†Karp, Julius P. 171 Church St., Hartford
†Long, Ralph F. 120 Main St., Terryville (Bristol)
Long, Roy A. Westport
*MacCormack, William D. Central Village (Moosup)
*Posner, Samuel c/o Dr. Perry, 485 Howard Ave., New Haven
*Prisque, Raymond C. Dayville (Killingly)
*Slabotsky, Samuel 256 Main St., Derby
VonSassenhoffen, A. C. S. 831 Chapel St., New Haven

*Appealed subsequently to State Supreme Court
†Appeal sustained

Others graduating from the Kansas City College of Medicine and Surgery who had appealed but who, when the cases came to trial, failed to perfect these appeals, thus forfeiting their rights to a court hearing are listed below. These persons can no longer practice medicine in Connecticut.

Burstan, Lillian 33 Coleman St., Bridgeport
Bush, Andrew P. 33 Court St., New Britain
Christian, James A. 640 Post Road, Fairfield
Cotner, James W. 2816 Main St., Stratford
Cotner, Jennie S. 2816 Main St., Stratford

In July, 1927, the appeals of persons claiming graduation from the St. Louis College of Physicians and Surgeons were heard in the New Haven County Superior Court. They are:

*Campo, Anthony R. 495 Atlantic St., Stamford
*Coppola, Modestino 158 Columbus Ave., New Haven
*Feldman, William 228 Windsor St., Hartford
*Lerner, Samuel 1001 State St., Bridgeport
*Levy, William 147 Windsor Ave., Hartford
Lilienthal, Samuel 850 Howard Ave., Bridgeport
*Mower, Etamar A. 147 Windsor Ave., Hartford

*Appealed subsequently to State Supreme Court

Two physicians whose cases were listed to be heard at this time, failed to appear and their appeals were dismissed. They can no longer practice:

Braverman, Harry 441 Atlantic St., Stamford
Desaunier, Leon F. 158 Columbus Ave., New Haven

Following these trials, the only appeals sustained by the court were those of James W. Bush, Allie J. Goodwin, Julius P. Karp and Ralph F. Long.

The cases tried in June and July of this year were those of physicians residing in Connecticut, according to the information available.

There are several persons claiming graduation from the Kansas City College of Medicine and Surgery residing outside of Connecticut whose cases have not yet been heard. They are:

Bagby, Roland O. 204 Westside Bldg., Kansas City, Mo.
*Beard, Calvin A. 532 Altman Bldg., Kansas City, Mo.
*Beeby, Charles B. Huntsville, Ark.
Bond, Alva B. 100½ West 10th St., Little Rock, Ark.
*Boone, Richard F. 47th & Troost Sts., Kansas City, Mo.
Bruce, John W. Kansas City, Mo.
Carlson, Edward J. 1230 Main St., Kansas City, Mo.
*Daniel, Archie Lee 532 Altman Bldg., Kansas City, Mo.
*Fitzgerald, Leslie M. 1014½ E. 8th St., Kansas City, Mo.
*Flynn, James J. 301 New Center Bldg., Kansas City, Mo.
Horton, Ray B. Purdy, Mo.
Hull, Edward M. 4414 Delmar Blvd., St. Louis, Mo.
Kelso, James 4002 Gallia Ave., Portsmouth, Ohio
*Kram, Elias 4317 Flora Ave., Kansas City, Mo.
*McClure, John H. 55464 Hollywood Blvd., Los Angeles, Calif.
*Miller, George H. 1801 Cent Ave., Kansas City, Mo.
Osborn, Horatius D. Milford, Geary County, Kansas
Schireson, Henry J. 716-18 State Lake Bldg., Chicago, Ill.
*Sharp, Bess Walker 1001 E. 15th St., Kansas City, Mo.
Sheld, Herman H. 161 Prospect Ave., Brooklyn, N. Y.
*Teubel, Edward C. 20 North 14th St., Kansas City, Mo.
Tupper, George W. Main St., East, Listowel, Ontario, Canada
Van Halteren, Guy W. 103½ East 7th St., Ft. Worth, Texas

*Cases not perfected so cannot come before the court. These persons can no longer practice in Connecticut.

Six persons, residing out of the state and claiming graduation from the St. Louis College of Physicians and Surgeons have not yet had their cases heard in court. Their names follow:

Ash, Alma S. 1012 Locust St., Kansas City, Mo.
Carter, Hedley V. 319 N. Charles St., Baltimore, Md.
Ferri, Nicholas A. 4007 W. Madison St., Chicago, Ill.
Krall, Adolph M. 1502 No. Jefferson Ave., St. Louis, Mo.
Robinson, Monte Val 4655 So. Michigan Ave., Chicago, Ill.
Tuttle, Lamar K. 18 East 41st St., New York City

No graduates of the Middlesex College of Medicine and Surgery whose licenses were revoked, have yet had their cases heard in court. These persons are:

In state:

Babtkis, David S. 1110 State St., Bridgeport
Boucher, George J. 49 Prospect St., Bristol
Cohen, Simeon 56½ W. Main St., Meriden
Cornwall, Isaac W. 35 Kennedy St., Hartford
DeBellis, Wm.B. 60 Beecher Ave., Waterbury
Roody, William A. 86 John St., Hartford
Tetrault, Philias 168 Main St., Putnam
Turcotte, Samuel J. 27 Union St.,Willimantic
Whittington, Frazier S. 427 No. Main St., Waterbury

Out of state:

Carr, Harry N. 90 Elm St., Westfield, Mass.
Cleveland, Harold F. 462 Belmont Ave., Springfield, Mass.
Cowan, Clyde R. Hotel Buckminster, Boston, Mass.
Cregg, Aloysius J. Needham, Mass.
Flagg, Franklin I. 114 Huntington Ave., Boston, Mass.
Guarini, Cesidio A. 298 Hanover St., Boston, Mass.
Licata, Francis, 81 Revere St., Revere, Mass.
Michelson, Ellis 282 Summer St., Lynn, Mass.
Nixon, George H. Washington, D. C.
Pendola, Anthony S. 211 High St., Holyoke, Mass.
Shattuck, Ray H. 320 Pleasant St., Malden, Mass.
Williams, Benjamin C. 177 Friendship St., Providence, R. I.
Zuckerman, Bernard, Hudson River State Hosp., New York

Two persons claiming graduation from the Boston College of Physicians and Surgeons whose appeals have not yet been heard are:

Cohan, Abraham, 35 Hancock St., Boston, Mass.
†Hammie, Robert P. 532 Broad St., Bridgeport, Conn.

†As mentioned previously, Hammie's case differs somewhat from the others mentioned. He took the examination of the Connecticut Medical Examining Board several times and failed and then took the Eclectic Examining Board's examination once and passed. This case was referred to the Attorney General in 1922 who gave an opinion stating that he believed Hammie's license was illegally issued. Robert P. Hammie was so notified and surrendered his license to the State Department of Health. Following this revocation, Hammie did not practice medicine until the passage of the 1925 law which permitted him to appeal.

Other physicians whose licenses were revoked and whose cases have not yet been heard are:

Romeo, Pasquale, 564 Washington Ave., Bridgeport, Conn. who claims to be a graduate of the Eclectic Medical University of Missouri.

Brinkley, John R. Milford, Kansas, who claims graduation from the Eclectic Medical University of Kansas City.

Webb, Frank, 1576 Iranistan Ave., Bridgeport, Conn. who was admitted to practice under the act of 1893.

The following persons filed injunctions preventing the department from revoking their licenses.

Graduates of Middlesex College of Medicine and Surgery:

DelGiudice, Ralph 218 Hamilton St., New Haven, Conn.
Hraba, John 427 So. Huntington St., Boston, Mass.
Zweben, Albert 174 Main St., Stamford, Conn.

Graduate of Chicago College of Medicine and Surgery and Kansas City College of Medicine and Surgery:

Burstan, Maurice B. 1516 Plimpton Ave., Bronx, New York City

The following persons whose licenses were revoked, did not appeal so their right to practice ceased when their licenses were revoked on the dates given below:

December 4, 1923	Last known address
Tuttle, Frances Axman	96 Glenbrook Road, Stamford (1922)
Bollmeier, Ludolf N.	Dagus Mines, Pa. (1926)
McCarthy, Nathaniel	Turners Corner, Silvermine Rd., New Canaan (1924)
Noeling, George D.	730 State St., Bridgeport, Conn. (1923)
Wheeler, Howard M.	Helena, Okla. (1926)
January 12, 1924	
Burkhead, Naaman H.	Noroton Heights, Darien, Conn. (1923)
February 1, 1924	
Arne, James A.	348 Main St., Medford, Mass. (1926)
Buehler, John B.	749 So. Kingsley Drive, Los Angeles, Cal. (1926)
Carmody, Wilma G.	Brewster Hotel, Fourth & C St., San Diego, Calif. (1924)
Cohn, Abe Richard	Philadelphia, Pa. (1922)
Covey, Russell E.	608 Shukut Bldg., Kansas City, Mo. (1926)
Cuono, Frederick A.	Berwind Maternity Clinic, New York City, (1922)
DeGaetani, Francis M.	153 West 123rd St., New York City (1923)
Ellis, Clinton B.	31st & Oak Sts., Kansas City, Mo. (1926)
Feldman, Max	3252 W. Polk St., Chicago, Ill. (1922)
Finaldi, Ralph	651 No. Main St., Waterbury, Conn. (1923)
Fleishman, Moritz H.	5917 Locust St., Kansas City, Mo. (1923)
Galbreath, William O.	730 State St., Bridgeport, Conn. (1923)
Golstein, Anna	4708 Vernon Ave., St. Louis, Mo. (1926)
Guild, William A.	2134 Pierce Ave., Chicago, Ill. (1926)
Hammond, Paul L.	Bradley, Ark. (1926)
Hedge, Mayro O.	1402 Central Ave., Kansas City., Mo. (1926)
Hopper, Ernest P.	Marked Tree, Ark. (1926)
Huber, Lasley E.	Wabash Hospital, Moberly, Mo. (1926)
Jarco, Leon W.	Wabash Hospital, Moberly, Mo. (1923)
Jergins, Sigurd	838 E. 47th St., Chicago, Ill. (1923)
Kesten, Edward A.	2118 W. Division St., Chicago, Ill. (1923)
Kleinwachter, Adolph	3410 Michigan Aev., Indiana Harbor, Ind. (1923)
Lain, Clarence E.	Weyanwega, Wis. (1922)

Lape, Ewing A.	1630 S. 11th Ave., Maywood, Ill. (1923)
Leondides, D. J. C.	105 Congress Ave., New Haven, Conn. (1922)
Leven, Aaron S.	1021 Ainslee St., Chicago, Ill. (1923)
Linehan, Catherine	P. O. Box 3, Stamford, Conn. (1923)
Martin, Orel F.	1069 Boylston St., Boston, Mass. (1923)
Marzio, Paul V.	52 East 97th St., New York City (1923)
McGoff, Joseph W.	57 Hemingway St., Boston, Mass. (1922)
McIver, John M.	Hotel Mahackmo, Norwich, Conn. (1927)
McNarry, Earl W.	1806 Coleman St., St. Louis, Mo. (1921)
Miczoll, K. P.	3524 Washington Ave., St. Louis, Mo. (1921)
Mulford, George S.	350 Greenwich Ave., Greenwich, Conn. (1923)
Petty, Walter J.	Brittain-McCasland Bldg., Duncan, Okla. (1923)
Pinkerton, Harry W.	730 State St., Bridgeport, Conn. (1923)
Pyrtle, Archie H.	Watalula, Ark. (1926)
Richardson, John W.	745 No. Main St., Waterbury, Conn. (1922)
Salas, Albert M.	26 E. Main St., Waterbury, Conn. (1923)
Schirmer, Jacob S.	Silvey Bldg., Atlanta, Ga. (1926)
Scott, Morgan H.	Jenny Lind, Ark. (1926)
Shattuck, Ray H.	320 Pleasant St., Malden, Mass. (1926)
Shenton, Albert W.	46 So. Main St., So. Norwalk, Conn. (1923)
Shoollin, Samuel F.	3318 Michigan St., Indiana Harbor, Ind. (1923)
Simmons, Richard H.	3200 Independence Ave., Kansas City, Mo. (1923)
Steward, Charles M.	4300 Lloyd Ave., Kansas City, Kan. (1924)
Von Brandenstein, Erich	Cuero, Texas (1923)
Warden, Lawrence M.	Center Hill, Ark. (1926)
White, Isaac A.	3744 Olive St., St. Louis, Mo. (1922)
Wilson, Margaret	1710 No. LaSalle St., Chicago, Ill. (1927)
Zeitler, Walter A.	2710 No. Grand Blvd., St. Louis, Mo. (1923)
Zeitler, William T.	2710 No. Grand Blvd., St. Louis, Mo. (1926)

THE VITAMINS

By Elizabeth C. Nickerson

The vitamins which crept into prominence in such mysterious fashion a few years ago are no longer looked upon as strangers but are now known to be vital factors in health. They have been likened to spark plugs which set in motion all the life processes of the body. Without them, growth slows up and finally ceases, serious nerve disorders result, the natural resistance to infection is lessened and specific diseases develop.

A knowledge of the vitamins has come about through a study of animal response when each of the vitamins in turn has for some time been entirely lacking in their diet. With a basic diet which is adequate in every respect, protein, minerals, calories, and all the known vitamins but one, certain startling effects are apparent in the condition of the animals studied. When the missing vitamin is again supplied the animal response is studied as to acceleration of growth, or recovery from abnormal conditions. In this way the vitamin content of foods is determined. The power of the vitamins to prevent illness or loss of weight may equally well be studied in which case the amount and source of a given vitamin is determined as to its ability to keep an animal in normal healthy condition. Thus it is found that foods differ widely as to their content of vitamins.

How They were Discovered

The discovery of vitamins was quite by accident. When Hopkins of England in the early part of this century was making some nutrition studies with animals in which purified foodstuffs were being used he discovered that the animals lost weight, sickened and died unless certain amounts of natural foodstuffs were added to the diet. He knew nothing about the vitamins, in fact that word was not yet coined. Not understanding the condition he came to the conclusion that animals to attain normal growth and health need something more than pure protein, mineral elements, fat and carbohydrate no matter how carefully these are made up to conform to the known standards for an adequate diet. He noted the effect on growth and health when small amounts of milk were added to such diets. His results were not published until some years later when in 1913, at about the same time, came confirmation of his observations from the independent researches of McCollum and Davis at Wisconsin and Osborne and Mendell at New Haven. These workers all came to the conclusion that a substance present in certain fats was essential to normal growth and health of animals in addition to purified foodstuffs which theoretically made up an adequate diet. Thus was vitamin A discovered, though it was not so named until

various workers who for years had been studying such diseases as beri-beri, a nerve disease of oriental countries, and scurvy, had come to the conclusion that there was more than one vital factor or "accessory substance" beside protein and mineral elements essential to growth and health. In connection with these substances Funk working in Germany had coined the word "vitamine" which by common consent was later changed to "vitamin".

In as much as the chemical structure of these substances is not known no names have been assigned to them, each one being known by some distinguishing charactistic such as water-soluble or fat-soluble, antineuritic, antiscorbutic or antirachitic, according to their method of extraction or specific disease with which they are associated. These names have again been simplified to vitamin A, vitamin B, vitamin C, vitamin D, and vitamin E, which names at the present time are in common usage.

Vitamin B

In point of time vitamin B was discovered first, being associated with the disease beri-beri so well known in the east. This disease has prevailed in Japan and the Philippines and other oriental countries where the diet has largely consisted of rice and fish. As long ago as 1898 a study of this nerve disease beri-beri was being carried on in these countries and a Dutch chemist, Eijkman had already produced a like nerve disease in fowls which he called polyneuritis. This was induced by a diet of polished rice, but could be cured or prevented whenever the rice polishings were fed as well. This showed that there was something in the rice polishings not present in the inner layers of the grain, and this substance was termed "accessory substance" essential to health. Thus began a study of beri-beri by many workers who discovered other foods which contained this vitamin, now known as vitamin B.

Since those early days vitamin B has had careful study in nutrition laboratories in connection with general vitamin studies. By the severity of the polyneuritis in pigeons induced by the lack of vitamin B in the diet or the failure of symptoms to develop, it has been possible to determine which foods contain vitamin B and in what amounts. This study has brought forth many interesting facts—that failure to provide vitamin B reacts sharply on the appetite of animals resulting in loss of weight. Rats deprived of this vitamin lose their appetite and so fail to eat food in amounts necessary for health thus making of vitamin B a growth factor as well as a preventive against a neuritis. Whether the substance that causes both these effects is one and the same, or whether vitamin B will later be split into two vitamins is not known* for the present as vita-

*Since this article was sent to press it has been suggested by the Committee on Nutritional Standards at the A. P. H. A. Convention that the term "B Complex" be used to describe this dual (or more) nature of Vitamin B.

min B is definitely known as one factor in growth, it demands a place in the diet, particularly of growing children, and since it so seriously affects the appetite, it is also an important factor in adult health.

Vitamin B is quite widely distributed in foods, being found in milk, fruits and in green vegetables. It is very rich in the whole grain cereals and breads in which the outer coats and the germ are still present. It is rich in yeast which fact has led many commercial advertisers to over emphasize the value of yeast in the diet. The dried legumes are also rich in vitamin B. So, with a daily use of milk, fruits, green and dried vegetables, and whole grain cereals and breads one will be plentifully supplied with vitamin B without the necessity of using commercial preparations .

Vitamin C

What represents vitamin C, or the antiscorbutic vitamin, has also been known for many years, though it was not so called until recently. Scurvy has been one of the common diseases of Europe, and of this country in the early days. Even as recently as Civil War days scurvy broke out in the army. Scurvy was associated in earliest days with long voyages where the ships' supplies were lacking in fresh foods. Not until cultivation of the potato was introduced into Europe, thus making available this vegetable in large quantities, were scurvy outbreaks arrested. It was also learned that whenever ships carried a supply of lime juice (or lemon juice) scurvy did not develop.

Recent nutritional study has given the clue to the cause or prevention of this disease as vitamin C. In an effort to study beri-beri experimentally with a mammal, guinea pigs were substituted for pigeons and on a purely grain diet they developed scurvy instead of beri-beri. Further study showed that this was induced by the lack of some fresh food. This led to a study of scurvy with guinea pigs as the experimental animal since they are unusually susceptible to this disease. So sensitive are they in fact that a young guinea pig will develop severe scurvy in exactly two weeks unless some fresh green food is supplied. In our own research work scurvy could be prevented in such young animals by the addition of only one gram of raw spinach daily to an otherwise adequate diet.

So the vitamin C content of foods has been determined through a study of the guinea pig's reaction to a lack of it in the diet. This has revealed the fact that vitamin C is not so widely distributed in foods as is vitamin B. It is found richly in raw green leafy vegetables like spinach, lettuce, cabbage, chard, and in fresh fruits, oranges, lemons, grapefruit and tomatoes. It is found in small amounts in milk, potatoes, apples and many other fruits, which, in view of the fact that they are articles of common diet and used freely, become important sources of vitamin C.

Vitamin A

Vitamin A, or the "fat-soluble" vitamin will always be associated in our minds with the *discovery of vitamins* which, in connection with experimental studies on the growth and nutrition of rats, demanded recognition about fifteen years ago.

Vitamin A is associated with fats—fat of milk, of cream, of butter, of egg yolk, of cod liver oil, while lard and vegetable fats are lacking in it or have only traces of it. Experimental work has shown that young rats on an otherwise adequate diet, deprived of vitamin A over long periods soon rapidly lose weight ending in death if continued. It was also discovered that lack of vitamin A often led to a peculiar eye disease, which could be cured by the addition of a food rich in vitamin A.

Studies have also indicated that unlike the other vitamins the body can store vitamin A since rapid loss of weight and eye infection does not at times follow immediately the withdrawal of the vitamin A supply from the diet. When depleted of this vitamin the tissues, particularly lung tissue are an easy prey to infections. So vitamin A beside being the important factor in growth is also a protective against certain infections those that involve the membranes and lung tissue.

Vitamin A is fairly restricted as to source, though it is more widely distributed than vitamin C. As mentioned above it is found richly in whole milk, cream, butter, yolk of egg, cod liver oil and in the green leafy vegetable such as spinach. Young raw carrots are also rich in vitamin A, raw green cabbage, and tomatoes are a good source. Liver is also known to be rich in it, this even more than lung tissue being the storage organ for vitamin A. The young vegetables like young new carrots and young green peas are richer in vitamin A than those of older growth.

Vitamin D

More recently named than the other vitamins, vitamin D is also a fat-soluble vitamin being found richly in cod liver oil and yolk of egg and in fair amount in whole milk and green vegetables. Studies in connection with rickets have proved that this vitamin is a specific against this disease, this in addition to a diet which maintains as well a balance between calcium and phosphorus.

So conclusive has been the evidence of the power of vitamin D to cure and prevent rickets that cod liver oil is now universally adopted in the early months of infant feeding to ward off this disease. This given daily in gradually increasing doses each month during the first two years is one of the big factors in the calcification of bone during its early growth and development. This and the sunlight cure for babies should relegate into the background that dread disease rickets resulting in soft bony tissue and an adult heritage of bow legs.

Vitamin E

More recently experimental work has pointed to still another fat soluble vitamin differing from A and D. This is at present known as Vitamin E or the antisterility vitamin. Certain investigators have given conclusive proof that this vitamin is needed for reproduction. Since this vitamin is widely distributed in foods it does not as yet assume an important place in human nutrition and reproductive processes, though the lack of it in laboratory animals fed on purified food stuffs has led to sterility.

Effect of Heat on the Vitamins

Since much of the food that we eat has to be cooked to make it palatable and digestible it is well to consider this in its possible relation to the vitamins. In general it may be said that vitamin A is fairly stable to the heating of ordinary cooking while vitamin B is less so and vitamin C is subject to more or less destruction. The length of time and the temperature are also factors, so long continued cooking or much reheating of foods, is apt to lessen the amount of vitamins. While vitamin A and B in ordinary cooking are not lost to any great extent, vitamin C is easily affected. For this reason it is wise to include in the diet some raw food as a source of vitamin C, such as fruit or fruit juices and lettuce or raw cabbage.

It is known also that oxidation plays a part in the destruction of the vitamins and that they are all affected by an alkali like soda. So the habit of cooking foods for a long time uncovered, and of adding soda to soften the fiber should be discouraged. There is probably slighter loss of vitamins, except vitamin C, in commercially canned foods on this account. Strange to say tomatoes which are very rich in vitamin C are not in any wayy deprived of this vitamin in canning or cooking. This is doubtless due to their high acid content.

Vitamins In the Diet

With a recognition of the importance of vitamins as factors in growth and normal nutrition, and as "protective foods" against infections every person should be supplied daily with those foods which are known to be rich sources of each. It is not necessary to add to the burdens of the housekeeper the task of figuring the vitamins in each day's menus. All she needs to know is that whole milk, cream, butter, the green leafy vegetables, fruits and whole grain cereals and breads contain the vitamins in the largest amounts. Supplying these each day and some of these as raw foods she will easily meet the needs unless she at the same time too liberally supplies an excessive amount of sugar and refined starchy foods which, being devoid of vitamins are apt to dilute the total amount below actual requirements.

NEWS NOTES FROM THE FIELD

1927 Connecticut's Healthiest Year

The lowest death rate ever recorded for the month of August was 8.5 established last August.

There were no deaths from typhoid fever during August. Another record!

See details on page 225 of this issue.

Physicians Licensed

Bridgeport, Goldys, Frank Max, St. Vincent's Hospital.
Cromwell, Ward, Arthur Henry, Cromwell Hall.
Greenwich, Clark, James Bayard, 290 Field Point Road.
Hartford, Klein, Isadore, 60 Williams Street.
New Haven, Jackson, Edith Banfield, 63 Putnam Avenue.
Stamford, Wilson, William Andrew, 58 South Street.
West Haven, Snavely, Marion Elizabeth, 546 Washington Avenue.

Health Officers Appointed

William A. King, Esq., County Health Officer of Windham County has appointed Mrs. James Ryan town health officer of Pomfret during the absence of Mr. Covell.

Public Health Instruction

Visual health instruction has reached the four corners of the state during the month with the sending of a health exhibit to the agricultural fairs. Up to date seven fairs have been attended with a record attendance of 30,530. These represent sixteen days of exhibiting.

Winter work is already in progress. Films are daily shipped out to meet requests from schools, churches and public theatres. This work has been stimulated by the fact that films on noninflammable stock can now be shown with approved projectorscopes without a fireproof booth. We anticipate a big season for films.

The public health course of lectures offered to hospital training schools is now being given at W. W. Backus Hospital, Norwich, and Hartford Hospital.

Public Health Nursing

Application for state aid for public health nursing in North Canaan was approved at the last meeting of the Public Health Council. Funds for this were made available by the last legislature.

Other applications now pending, will be voted on at the next meeting of the council.

Laboratories

SUMMARY OF BUREAU ACTIVITIES
SEPTEMBER, 1927

DIAGNOSTIC EXAMINATIONS

	+	—	?	Unclassified	Total
Typhoid	15	374	7	....	396
Paratyphoid A	....	396	....	....	396
Paratyphoid B	....	396	....	....	396
Diphtheria	39	647	....	....	686
Diphtheria Virulence	9	30	....	....	39
Vincent's Angina	5	450	....	....	455
Hemolytic Streptococci	9	443	....	....	452
Tuberculosis	17	189	....	....	206
Syphilis	418	2035	150	....	2603
Gonorrhoea	30	93	....	....	123
Malaria	....	5	....	....	5
Pneumonia	1	1	....	....	2
Rabies	2	3	....	....	5
Special Specimens	3	3	....	77	83

Total examinations	5,847

CHEMICAL AND BACTERIOLOGICAL

Milk	351
Cream	17
Water samples	158
Ice	1
Sewage	20
Sea Food	8
Clinical thermometers	189
Total examinations	744
Total examinations made	6,591

Vital Statistics

MONTH OF AUGUST

TOTALS FOR FIRST EIGHT MONTHS OF THE YEAR, 1927, 1926, 1925

Year	Births	Birth Rate*	Marriages	Mar. Rate*	Deaths	DeathRate*
1927	18,888	17.8±.1	7,336	6.9±.1	11,262	10.7±.1
1926	19,985	19.2±.1	7,591	7.3±.1	12,751	12.2±.1
1925	20,269	19.9±.1	7,644	7.4±.1	11,935	11.7±.1

*Rate on annual basis, per 1,000 population

The above figures show the experience of the first eight months of the last three years. For some time attention has been called to the continued decrease in births and birth rates and this month is no exception. The accumulated birth rate has now dropped to 17.8. This is the same rate that appeared in July for the first seven months of 1927. The decrease from a rate of 19.0 in 1926 to 17.8 in 1927, a drop of 1.2, cannot be explained as a mere chance phenomenon.

There is also a decrease in the marriages and marriage rate. From 7.2 in 1926 the rate has dropped to 6.9, a decrease of 0.3 of a point, which is on the borderland of significance from a statistical viewpoint.

The deaths and death rate for 1927 show remarkable decreases compared with 1926. The number of deaths is nearly 1,500 less than last year and the rate is 1.5 below the rate of a year ago. Such a decrease is very remarkable when it is noted that a decrease of only about 0.1 is to be expected to arise from pure chance alone. At present all indications point to a record year. So far in the history of vital statistics of the state 11.3 is the lowest death rate, established in 1924. With four relatively favorable months to be tabulated before the end of the year it is practically certain that this low record will be broken.

Births

During the month 2375 records of births were received. This total is 292 below the 2667 reported in 1926 and going back six years to 1922 when 2827 births were recorded during the month, a decrease of 452 will appear. With respect to birth rates, the rate in 1927 is 17.9, in 1926 it was 20.5 and in 1922 it was 23.4.

To account for such decreases is no simple matter. For one thing the marriages are decreasing. Perhaps the immigration laws are excluding the more prolific foreigner. It is extremely

doubtful if there is at present any economic depression which would cause a fall in birth rate. Certainly it is an era of intense social activity with many interests for everybody and this no doubt will in a large part account for the decrease.

A few towns having 5,000 or more in population reported more births for August 1927 than in the corresponding month of 1926. Those having increases of 10 or more were:

East Hartford	17±7	Windsor	12±4
Fairfield	10±6	Hamden	12±6
West Hartford	14±6		

Under ordinary circumstances all of these increases would be considered as significant of an increase of more than passing notice. But owing to the fact that in 1927 all births are credited to the town or city of residence of the mother, the current year is not strictly comparable to 1926. In the list above East Hartford, West Hartford and Windsor probably increased at the expense of Hartford, while Hamden drew births, in the past credited to New Haven and Fairfield, no doubt gained from Bridgeport. The adjustment of births is made necessary if the adjusted deaths of infants is to give a true infant mortality rate.

Records of 84 stillbirths were received during the month giving a total number of births, living and stillbirths, of 2459. Stillbirths therefore appeared at the rate of 34.1±3.8 per 1,000 total births. In 1926 there were 76 stillbirths among 2743 total births or stillbirths occurred at the rate of 27.7±3.1 per 1,000 total births. The difference in rate is 6.4±5.0 and is not an increase of significance.

With reference to the sex of the stillbirths there were 48 males and 36 females, giving a sex ratio of 135 males to 100 females.

Deaths

The death number 1130 for the month, 180 less than the 1926 total of 1310, and by no inconsiderable amount less than any year since and including 1922. The rate is 8.5 per 1,000 population and is truly an astonishingly low rate. Everything is pointing to a record year for 1927. So far the year 1927 is 1489 deaths less than 1926. If the total number of deaths for the entire year is less by the same amount, the 1927 death rate will be 10.6. If, therefore, there is no extreme hard luck, and 1927 finishes with no more mortality than in 1926, a record year will have ended. The possibility of such an event is very great.

Reviewing the increase or decrease of 1927 with reference to 1926, for certain causes of death, gives the following table:

Cause of Death	1927	1926	Increase	Decrease
Diseases of the heart	187±14	182±13	5±19	....
Epidemic Encephalitis	2±1	1±1	1±2	....
Pneumonia, undefined	0	1±1	....	1±1
Typhoid fever	0	8±3	....	8±3
Measles	2±1	1±1	1±2	....
Scarlet Fever	0	0	....	....
Whooping Cough	2±1	4±2	....	2±2
Diphtheria	8±3	2±1	6±3	....
Influenza	5±2	4±2	1±3	....
Tuberculosis, pulmonary	52±7	85±9	....	33±12
Tuberculosis, other forms	12±3	14±4	....	2±5
Cancer	118±11	133±12	....	15±16
Cerebrospinal Meningitis	2±1	1±1	1±2	....
Poliomyelitis	1±1	0	1±1	....
Lobar Pneumonia	31±6	19±4	12±7	....
Broncho Pneumonia	29±5	16±4	13±7	....
Diarrhea and Enteritis under 2	18±4	55±7	....	37±9
Puerperal Diseases	13±4	13±4	....	....
Accident	84±9	93±10	....	9±13
Suicide	19±4	21±5	....	2±7
Homicide	4±2	3±2	1±2	....
Other causes	541±23	654±25	....	113....35
Totals	1130±34	1310±36	42	222

Examining first the increases it is quite likely that the increase for diphtheria is of moment. There seems to be a tendency for the cases reported to run higher than the corresponding months of 1926. There should therefore be careful guard that this unnecessary disease be not permitted to get out of control temporarily.

The pneumonia increase gives evidence that the various forms of this disease "are still with us". The toast master at any mortality table could safely arise to introduce the pneumonias with the form "we have with us etc." Possibly the rainy month had much to do with the increase.

Of the decreases there are a number of great interest. First of all, during the entire month of August there was no death from typhoid. A year ago there were 8 and this decrease is certainly of great interest and significance. There is a very splendid and noteworthy decrease in pulmonary tuberculosis and a truly remarkable decrease in infantile diarrhea.

The decrease of 113±35 due to other causes leaves us in the dark temporarily just where this decrease occurred. Neither can we say whether or not the reduction was distributed over a number of diseases.

There were 26 deaths from automobile accidents as compared with 28 a year ago. A decrease of only 2 but every little bit helps!

The infant mortality for the month was 51.5 as compared with 67.4 a year ago. No doubt the reduction in deaths from diarrhea helped to reduce this mortality.

FOR SIX YEARS—AUGUST 1927

CONNECTICUT	1922	1923	1924	1925	1926	1927
BIRTHS	2827	2788	2871	2540	2667	2375
Birth Rate	23.4	22.7	22.9	19.9	20.5	17.9
MARRIAGES	940	1013	1074	984	964	899
Marriage Rate	7.8	8.2	8.6	7.7	7.4	6.8
DEATHS	1264	1229	1242	1276	1310	1130
Death Rate	10.5	9.9	9.9	10.0	10.1	8.5
COMMUNICABLE DIS.* DEATHS	113	137	116	91	107	72
Per Cent to Total Deaths	8.9	11.1	9.3	7.1	8.2	6.4
DEATHS UNDER 1 YEAR	215	189	176	194	173	122
Rate Per 1,000 Births	81.3	73.6	66.5	78.1	71.9	51.5

*Includes Typhoid Fever, Measles, Scarlet Fever, Whooping Cough, Diphtheria, Tuberculosis Pulmonary, Cerebrospinal Meningitis, Poliomyelitis, Influenza.

Statistics
August, 1927

	Population Est. as of July 1, 1927 Based on U. S. Census	TOTALS				DEATH RATES			AGE GROUPS		
		Births	Stillbirths	Marriages	Deaths	All Causes (per 1,000 population)	Tuberculosis (per 1,000 population)	Children under 1 year (per 1,000 births)	Under 1 year	1 to 5 years	65 years and over
State of Connecticut	1,586,435	2375	84	899	1130	8.5	0.4	51.5	122	30	418
Ansonia	19,548	26		8	20	12.3		156.5	3	2	4
Branford	7,073	16		3	4	6.8		122.4	1		1
Bridgeport	174,890	292	7	74	91	6.2	0.1	31.4	8	4	35
Bristol	26,087	56	1	13	18	8.3	0.5		3	2	2
Danbury	21,931	35	1	13	20	10.9	2.2		3	1	7
Derby	12,963	18		4	10	9.3				1	
East Hartford	14,311	31		10	7	5.9			2		
Enfield	13,241	17		12	7	6.3	0.9	48.8	1	1	1
Fairfield	15,541	21		4	9	6.9		89.6	1		4
Glastonbury	6,206	8		2	6	11.6		166.6	1		3
Greenwich	26,373	27	3	52	12	5.5		23.7	1		2
Groton	11,326	13		6	5	5.3		109.1	1		4
Hamden	10,718	24		2	10	11.2	2.2	70.2	1		4
Hartford	168,258	273	15	118	126	8.9	0.5	46.4	16	5	42
Killingly	9,384	17		8	4	5.1	1.3	68.9	1		2
Manchester	21,992	31	3	10	18	9.8	1.1			1	7
Meriden	36,807	70	3	26	30	9.8	0.6	34.2	2		14
Middletown	22,932	26	4	7	13	6.8	0.5	62.3	3		6
Milford	14,673	4			1	0.8		106.2	1		
Naugatuck	16,829	12		7	6	4.3	0.7				2
New Britain	71,068	136	1	40	52	8.8	0.2	76.5	10	2	10
New Haven	184,727	244	13	100	122	7.9	0.6	25.9	8	2	43
New London	30,149	45	3	31	21	8.4		30.2	2		10
Norwalk	30,173	53	6	19	25	9.9	0.4	17.6	1	1	10
Norwich	30,689	51	1	25	34	13.3	0.4	64.3	4		17
Plainfield	8,818	12		9	3	4.1				1	2
Plainville	5,064	9			2	4.7					
Plymouth	6,459	8		3	1	1.9					1
Putnam	9,220	13		9	10	13.0		66.3	1		6
Seymour	8,321	5		1	5	7.2					2
Shelton	11,699	14	1	2	11	11.1					3
Southington	9,925	12		3	5	6.0					2
Stafford	5,472	10		4	5	11.0					1
Stamford	48,515	90	2	34	37	9.2		32.3	3	2	14
Stonington	11,041	14		11	7	7.6		93.8	1		3
Stratford	17,451	18	1	9	11	15.2		70.2	1		6
Thompson	5,226	11		5	1	2.3				1	
Torrington	25,316	32	1	14	13	6.2		49.4	2		5
Vernon	8,751	13		6	12	16.5		227.8	3		5
Wallingford	12,659	12		1	10	9.5	1.9				3
Waterbury	105,960	138	7	34	65	7.4	0.5	32.2	6	1	20
Watertown	7,506	7	1	4	5	7.9		151.9	1		2
West Hartford	11,908	27	2	4	13	13.1		284.0	4		6
West Haven	18,834	37	1	11	17	10.8	0.6	97.8	3		10
Westport	5,772	3		3	5	10.4		250.0	1		1
Wethersfield	5,264	4		2	2	4.6					
Winchester	9,109	11		7	15	19.8		184.6	3		6
Windham	14,418	14		8	9	7.5		161.6	4		4
Windsor	6,732	16		2	8	14.3		210.5	1	1	2
Towns under 5,000	209,106	252	7	119	163	9.4	0.5	72.3	14	2	74
Other States		47			24						10

DEATHS FROM IMPORTANT CAUSES

Diseases of the Heart	Encephalitis Epidemic	Pneumonia Undefined	Typhoid Fever	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Influenza	Tuberculosis-Pulmonary	Tuberculosis Other forms	Cancer	Meningitis-Cerebrospinal	Poliomyelitis	Pneumonia—Lobar	Pneumonia—Broncho	Diarrhoea-Enteritis Under 2	Puerperal Diseases	Accident	Suicide	Homicide	Institutional Deaths	Non-resident Deaths
187	2	.....	.....	2	.....	2	8	5	52	12	118	2	1	31	29	18	13	84	19	4	463	.....
4	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	2	1	1	1	.....	1	.....	7	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	1	.....
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Preventable Diseases

INCIDENCE OF DISEASE FOR MONTH OF SEPTEMBER, 1927

(As compared with previous years)

A comparison of the daily morbidity reports received during the month of September, 1927, with the corresponding month for the years 1922, 1923, 1924, 1925 and 1926.

	Average Mean 1922-1926 for Sept.	1922-1926 for Sept.	1922	1923	1924	1925	1926	1927
Cerebrospinal Meningitis ..	4	4	4	4	6	3	6	3
Diphtheria	103	112	178	115	112	67	42	78
Encephalitis Epidemic	4	3	2	3	4	2	4	3
Measles	31	28	50	28	21	31	26	27
Poliomyelitis	18	12	11	24	34	12	11	62
Scarlet Fever	99	91	143	91	103	70	89	64
Smallpox	....	....	2	2	....	....	....	....
Typhoid Fever	39	36	36	58	38	35	28	23
Tuberculosis Pulmonary	120	121	114	121	128	111	127	115
Whooping Cough	173	170	158	170	171	256	110	180

A comparison of the morbidity of these diseases for the two preceding months, July and August with the September record is as follows:

	July	August	September
Cerebrospinal Meningitis	4	1	3
Diphtheria	77	80	78
Encephalitis Epidemic	....	3	3
Measles	131	42	27
Poliomyelitis	4	52	62
Scarlet Fever	85	38	64
Smallpox	....	....	....
Typhoid Fever	9	13	23
Tuberculosis Pulmonary	196	96	115
Whooping Cough	113	191	180

Cases of Other Reportable Diseases

Chickenpox	33	Septic Sore Throat	6
Dysentery Bacillary	2	Tetanus	1
German Measles	4	Trichinosis	2
Influenza	5	Gonorrhoea	91
Malaria	2	Syphilis	112
Mumps	38		
Paratyphoid Fever	2	Total	298

Cases of Occupational Diseases

Aplastic Anemia due to Benzol Poisoning	1	Eczema	2
Dermatitis from Fulminate of Mercury	6	Total	9

Cases of Certain Reportable Diseases

September, 1927	Population Est. as of July 1, 1927	Typhoid Fever	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Meningitis Cerebrospinal	Poliomyelitis	Pulmonary Tuberculosis	Other Forms Tuberculosis	Pneumonia Lobar	Broncho-Pneumonia	Other Com. Diseases
State Total	**1,586,435**	**23**	**27**	**64**	**180**	**78**	**3**	**62**	**115**	**19**	**54**	**41**	**301**
NEW HAVEN CO.	475,419	9	10	11	40	25	.....	13	46	11	12	11	99
New Haven	184,727	6	9	3	32	9	.....	7	20	8	3	3	56
Waterbury	105,960	2	.....	3	.....	3	.....	2	12	1	2	5	8
Meriden (city and town)	36,807	.....	.....	2	.....	1	.....	1	6	1	3	2	12
Ansonia	19,548	.....	.....	1	.....	.....	.....	.....	2	1	1	.....	7
West Haven	18,834	1	.....	.....	.....	3	.....	1	.....	.....	.....	.....	3
Naugatuck	16,829	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Wallingford (town and boro)	12,659	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Milford	14,673	.....	1	1	.....	1	.....	.....	.....	.....	.....	.....	1
Derby	12,963	.....	.....	1	.....	.....	.....	.....	1	.....	.....	.....	4
Hamden	10,718	.....	.....	.....	7	1	.....	.....	.....	.....	2	.....	1
Branford (town and boro)	7,073	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	3
Seymour	8,321	.....	.....	.....	.....	7	.....	.....	3	.....	.....	.....	1
Towns under 5,000	26,307	.....	.....	.....	1	.....	.....	1	1	.....	1	1	2
FAIRFIELD CO.	379,505	1	9	24	40	22	1	9	30	1	11	3	54
Bridgeport	174,890	1	1	5	2	15	1	4	14	1	7	1	27
Stamford (city and town)	48,515	.....	1	5	20	.....	.....	2	2	.....	3	.....	4
Norwalk	30,173	.....	.....	.....	.....	2	.....	1	.....	.....	.....	1	.....
Danbury (city and town)	21,931	.....	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	1
Greenwich (town and boro)	26,373	.....	7	5	16	1	.....	.....	2	.....	.....	.....	10
Stratford	17,451	.....	.....	1	.....	2	.....	1	.....	.....	.....	.....	.....
Fairfield	15,541	.....	.....	.....	.....	1	.....	.....	3	.....	.....	.....	3
Shelton	11,699	.....	.....	5	.....	.....	.....	.....	1	.....	.....	.....	1
Westport	5,772	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Towns under 5,000	27,160	.....	.....	3	2	1	.....	1	5	.....	1	1	8
HARTFORD CO.	402,344	7	.....	8	61	16	1	21	21	4	16	18	70
Hartford	168,258	3	.....	3	53	3	.....	4	10	2	11	7	26
New Britain	71,068	1	.....	1	1	.....	.....	5	4	1	1	2	10
Bristol (city and town)	26,087	1	.....	2	.....	1	1	.....	1	.....	1	.....	15
Manchester	21,992	.....	.....	.....	.....	3	.....	.....	1	1	.....	3	3
Enfield	13,241	.....	.....	1	.....	4	.....	2	.....	.....	.....	.....	6
East Hartford	14,311	2	.....	.....	.....	3	.....	4	1	.....	1	.....	2
Southington (town and boro)	9,925	.....	.....	1	2	.....	.....	.....	.....	.....	1	.....	.....
West Hartford	11,908	.....	.....	.....	2	.....	.....	1	2	.....	.....	2	7
Windsor	6,732	.....	.....	.....	3	.....	.....	1	1	.....	.....	2	.....
Glastonbury	6,206	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....
Plainville	5,064	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wethersfield	5,264	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	1
Towns under 5,000	42,288	.....	.....	.....	.....	.....	.....	4	1	.....	.....	1	.....
NEW LONDON CO.	114,930	2	2	15	14	6	1	7	12	2	3	3	27
Norwich (city and town)	30,689	2	.....	5	.....	6	.....	.....	3	2	1	.....	.....
New London	30,149	.....	.....	1	13	.....	.....	5	4	.....	2	1	15
Stonington (town and boro)	11,041	.....	1	.....	.....	.....	1	.....	1	.....	.....	.....	.....
Groton (town and boro)	11,326	.....	1	7	.....	.....	.....	2	.....	.....	.....	.....	1
Towns under 5,000	31,725	.....	.....	2	1	.....	.....	.....	4	.....	.....	2	11
LITCHFIELD CO.	80,900	2	.....	3	8	1	.....	5	2	1	1	1	9
Torrington (town and boro)	25,316	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Winchester (inc. Winsted)	9,109	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....
Plymouth	6,459	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1	2
Watertown	7,506	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Towns under 5,000	32,510	1	.....	2	8	1	.....	2	2	1	1	.....	6
WINDHAM CO.	56,258	.....	.....	3	.....	1	.....	4	2	.....	5	3	11
Windham (inc. Willimantic)	14,418	.....	.....	.....	.....	.....	.....	.....	1	.....	2	.....	.....
Putnam (city and town)	9,220	.....	.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....
Plainfield	8,818	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
Killingly (inc. Danielson)	9,384	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	2
Thompson	5,226	.....	.....	2	.....	.....	.....	.....	1	.....	.....	1	.....
Towns under 5,000	9,192	.....	.....	.....	.....	1	.....	3	.....	.....	1	1	9
MIDDLESEX CO.	49,279	.....	6	.....	3	6	.....	1	1	.....	5	2	29
Middletown (city and town)	22,932	.....	6	.....	2	2	.....	1	.....	.....	4	2	28
Middletown State Hospital	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1
Towns under 5,000	26,347	.....	.....	.....	1	4	.....	.....	1	.....	.....	.....	1
TOLLAND CO.	27,800	2	.....	.....	14	1	.....	2	1	.....	1	.....	2
Vernon (inc. Rockville)	8,751	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
Stafford (town and boro)	5,472	.....	.....	.....	.....	1	.....	.....	1	.....	.....	.....	.....
Towns under 5,000	13,577	2	.....	.....	14	.....	.....	1	.....	.....	1	.....	2

PREVENT DIPHTHERIA

In Connecticut

By the Use of

TOXIN ANTITOXIN

In Every Town in the State

Your Physician Does it

State of Connecticut Health Bulletin

"For a Clean State and a Healthy People"

Vol. 41 November, 1927 No. 11

This Issue Contains

Supervision of Public Water Supplies in Connecticut

Suggestive List For a Popular Health Library

News Notes From the Field

Births, Deaths and Marriages for September, 1927

Summary of Laboratory activities for October, 1927

Incidence of Preventable Diseases for October, 1927

STANLEY H. OSBORN, M. D., C. P. H., Commissioner

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HARTFORD

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CONNECTICUT
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SUPERVISION OF PUBLIC WATER SUPPLIES IN CONNECTICUT

By Warren J. Scott

It is doubtful if many people realize the extent to which the State Department of Health operates in connection with the protection of public water supplies. Section 2528 of the General Statutes, Revision of 1918, states that "The State Department of Health shall have supervision over all matters concerning the purity of any source of water or ice supply used by any municipality, public institution or water or ice company for obtaining water or ice. The term 'source of water or ice supply' shall include all springs, streams, water courses, brooks, rivers, lakes, ponds, wells, or underground waters from which water or ice is taken, and all springs, streams, water courses, brooks, rivers, lakes, ponds, wells or underground waters tributary thereto and all lands drained thereby."

In order to assist the Department in carrying out this work, there are two other very pertinent statutes on the statute books. Section 2529 of the 1918 Revision provides: "Every person, firm or corporation supplying water to the public shall, on request, furnish the State Department of Health with all reasonable information regarding its water works and the source from which its supply of water is derived. No system of water supply owned or used by such municipal or private corporation or individual shall be constructed until the plans therefor have been submitted to and approved by the said department." Section 2530 states: "The State Department of Health may, and upon complaint shall, investigate any system of water supply or source of water or ice supply from which water or ice used by the public is obtained, and if it finds any pollution or threatened pollution which in its judgment is prejudicial to public health, it shall notify the owner of such system of water supply, or the person or corporation causing or permitting such pollution or threatened pollution, of its findings and after hearing shall make such orders as it shall

deem necessary to protect such water or ice supply and render such water or ice safe for domestic use." The power to employ agents, engineers and assistants for the work of water supply supervision is granted by Section 2531. Sections 2532, 2533 and 2534 provide procedures for appeal to the superior court from orders issued by the Department, procedure for enforcement of department orders and penalty for non-compliance with orders issued. There are additional statutes prohibiting wilful pollution of a water supply, bathing in water supply reservoirs and streams, and fishing in reservoirs except under permit from the local water officials. Section 2540 places authority in the hands of local officials to remedy dangerous sources of pollution to public water supplies.

A fairly comprehensive analysis of water supply laws in Connecticut and elsewhere, particularily, however, with reference to New England, appears in an article by the writer in the Journal of New England Water Works Association, Vol. XL, No. 4, December, 1926. The above references constitute only a brief summary.

Watershed Inspections

Of the 115 public water supplies in Connecticut, 80 are entirely from surface sources—i. e., they are derived from streams, lakes or reservoirs; and 7 are partially from such sources. Many of the drainage areas—sometimes called watersheds—tributary to these bodies of water, are large and contain many roads, houses, barns, etc. The supplies are, therefore, subject to possible pollution from the sewage disposal from these establishments, whether from privies, cesspools, sink drains or the like. Then, too, in addition to these so-called permanent sources of pollution, there is the opportunity for contamination of a chance or accidental nature, such as that introduced by hunters, picnickers, campers or other trespassers. The automobile has made populous some drainage areas which formerly were practically uninhabited.

The State Department of Health through its Bureau of Sanitary Engineering, which is charged with the field work relating to public water supplies, periodically inspects all the public watersheds in the state. An effort is made to carry out these inspections every year or at least every two years, depending on the personnel available. An engineer from the Department makes a careful survey of the sewage disposal conditions at each habitation on each watershed, together with a study of pollution hazards. In many cases, orders and recommendations are issued on the ground by the inspector. Sometimes it becomes necessary for the Department to issue written orders after hearings. Frequently undesirable conditions are remedied without difficulty by cooperation of the local water officials with the persons concerned. Reports of the inspections are forwarded

to the water officials who are asked to follow up the carrying out of any needed improvements, with the Department cooperating whenever desirable. Somewhat less attention is devoted to the watersheds of two or three supplies in the state where slow sand filtration and long time storage render a high degree of protection, although these watersheds, too, are inspected at occasional intervals.

Patrol of the watersheds is also carried out by local officials, with varying degrees of thoroughness. Even in the case of those supplies under careful control, it is found that the officials welcome an independent check-up of conditions by the Department, for, as in all other lines of endeavor, familiarity with local conditions by local employees sometimes results in something "getting by".

Although generally speaking, public well supplies are satisfactory, being usually safely located and constructed, yet they are also inspected and are regularily analyzed, as mentioned later.

Chlorination Plant Inspections

Disinfection of public water supplies by liquid chlorine has progressed very rapidly in the past few years. It has become recognized as a dependable means of safeguarding against accidental contamination of a supply. Under Connecticut conditions, where none of our public water supplies is subject to gross pollution, it is not necessary to rely on chlorination for first line defence, but its value as insurance against trouble is shown by the fact that in this state 39 public water supplies employ chlorination. There are 58 chlorination plants in Connecticut, exclusive of duplicate equipment, and upon recommendation by the Department another large water company intends to install chlorination apparatus immediately. About 75 per cent of the population of the state is estimated to be supplied by chlorinated water.

Chlorinators are delicate machines and require much care. All chlorination plants are regularly inspected, usually from two to six or more times a year, by an engineer from the Department. Tests are made on the chlorinated water to determine the efficiency of chlorination and many improvements in apparatus and maintenance have been secured by the Department in the past few years. It is unfortunately true that without supervision, chlorination would be sadly neglected on some water supplies, notwithstanding that many plants are conscientiously and satisfactorily maintained.

Filter Plant Inspections

At present there are three large slow sand filter plants in Hartford, New Haven (Lake Whitney supply), and South Norwalk,

with two or three smaller ones; rapid sand gravity filter plants on all or a portion of the supplies of Bethel, Putnam, South Manchester and Wallingford; and pressure filters at Collinsville, Greenwich and New Canaan. Greenwich is now engaged in constructing a more modern type of plant; Meriden is installing a rapid sand filtration plant on its Broad Brook supply; and interest is becoming manifest in several communities for improvement in physical characteristics of their supplies, i.e., the color, odor, taste and turbidity of the water.

An engineer from the Department visits these filter plants, which in some cases employ alum and soda ash in processes of coagulation and filtration, and makes any necessary recommendations to the operators to secure maximum efficiency.

Analyses of Public Water Supplies

At regular intervals, ranging from one to three months, each public water supply in the state is sampled and is analyzed by the Bureau of Laboratories of the Department. In most cases, containers for the collection of samples are sent out to the water officials and samples collected by them. Where a city secures its supply from two or more sources, each separate source is sampled and analyzed. Occasionally samples are sent in by local health officers, and representatives of the Department also frequently collect samples from various supplies they are inspecting.

Copies of all reports of analyses are forwarded by the Laboratories to the Bureau of Sanitary Engineering which makes any investigations shown to be necessary by unsatisfactory analyses. This results in a careful system of checking the qualities of the various supplies. Particularly some of the larger water works maintain their own laboratories where the desirable procedure of making daily bacteriological analyses of the supplies is carried out and summaries of these results are usually forwarded to the State Department of Health.

Tastes and Odors

Frequently complaints are made to the Department relative to tastes and odors in public water supplies. Algae trouble can often be remedied by copper sulphate treatment. Dead ends needing flushing sometimes cause complaint. Putrefactive conditions caused by decomposition of organic matter have produced objectionable conditions. The Department is always ready to investigate complaints or render advice to local officials in cases of trouble. In some instances, remedies are obvious or easy of accomplishment, whereas in other cases, extensive changes in supplies, such as installation of aeration or filtration, may be necessary.

Cross Connections

The Department, after much concern over the possibilities of pollution of potable water supplies by cross connections with auxiliary water supplies for fire or industrial purposes which are of questionable quality, on July 12, 1926, adopted regulations prohibiting such cross connections except that temporarily double check valves of approved type are permitted where installed in water-tight pits with indicator gate valves, gauges and drip cocks for testing. There are now 162 such double check valve installations in the state and these are at present being tested at intervals of about two months by a representative of the Department. Reports of the inspections are sent to the water officials. Any valves found leaking are immediately opened up for inspection and repair.

Adequacies of Public Water Supplies

So far as possible, the Department investigates the adequacies of public water supplies to see whether they appear to be sufficient for the needs of the communities served during seasons of dry weather. Estimates can be made by comparing water run-offs from supplies where quantities have been measured with similar supplies in question. Local officials are advised where supplies are considered inadequate. In the case of supplies which have failed in the past, the Department has, where necessary, taken action to secure the adoption of remedial measures.

Approval of New Supplies

Plans for new sources of water supply or new water treatment plants are submitted to the Department for approval in accordance with statutory requirements. These plans are reviewed by the Department engineers, and any necessary changes or recommendations made before approval by the Department. As a result of experience the Department has been able to be of considerable assistance to local officials in this work.

Summary

No attempt has been made to present here any exhaustive review of the Department's work for protection of public water supplies, but even from this brief summary it is hoped that some idea may be gained of the effort the Department is constantly making to safeguard and improve the public water supplies of Connecticut by inspections of watersheds, chlorination and filtration plants, investigation of complaints, surveys of adequacies of supplies, supervision of cross connections, approvals of new supplies, and periodic analyses of all public water supplies.

SUGGESTIVE LIST FOR A POPULAR HEALTH LIBRARY

The department is often asked to recommend health books for more or less popular use. Health officials, though they may have a personal library of technical books, have often not acquired a well-rounded library of health books that will serve them on all occasions in a many-phased program of health activities. Oftentimes the health books in public libraries are far from complete and are not kept up to date.

With the thought in mind that a well selected list of the newer health books and those tried and found worthy might be of value to all field health officials, to serve as a nucleus for their own libraries or to be recommended as valuable additions to town or city libraries, a few of the best books are recommended. It is of course not an exhaustive list, but suggestive only.

Public Health

Preventive Medicine and Hygiene (5th ed.) (1927) Rosenau
The New Public Health (1925) Hill
Evolution of Preventive Medicine (1927) Newsholme
Public Health and Hygiene (2nd ed.) Park
Public Health in Theory and Practice (1925) Welch
The Degenerative Diseases (1925) Barker and Sprunt
A Health Survey of 86 Cities (1925) American Child Health Association
The New Medical Follies (1927) Fishbein
Modern Science and Public Health (1926) Gruenberg
Consumption: What It Is and What To Do (3rd ed.) 1926 Hawes

Social Hygiene

Sex and Social Health (1924) Galloway

Mental Hygiene

A Present Day Conception of Mental Disorders (1924) Campbell
Why We Behave Like Human Beings (1925) Dorsey
Mental Growth of the Preschool Child (1925) Gesell
Essentials of Psychiatry (1925) Henry
Adolescent Girl (1925) Richmond
The Problem Child in School (1925) Sayles
Every Day Problems of the Every Day Child (1927) Thom
How We Become Personalities (1926) Williams

Sanitary Engineering

Municipal and Rural Sanitation (1927) Ehlers and Steel
Home Sewage Disposal (1924) Hardenbergh
Solving Sewage Problems (1926) Fuller and McClintock
Manual of American Water Works Practice (1925)
Home and Community Hygiene Broadhurst
Fresh Air and Ventilation (1926) Winslow

Vital Statistics

Vital Statistics (2nd ed.) 1926 Whipple
Medical Biometry and Statistics Pearl
An Introduction to the Theory of Statistics (7th ed.) (1924) Yule
A First Course in Statistics Jones

Child Hygiene

Child Hygiene (1925) Baker
Feeding and Nutritional Disorders In Infancy and Childhood (4th ed.) (1925) Hess
Short Talks With Young Mothers (8th ed.) (1926) Kerley
The Problems of Childhood (1926) Patri
Rebuilding the Child; a study in Malnutrition (1927) Richardson

Public Health Nursing

Short History of Nursing (1925) Dock and Stewart
Public Health Nursing (1924) Gardner

Food and Nutrition

Newer Knowledge of Nutrition (3rd ed.) (1925) McCollum
Feeding the Family (1924) Rose
Foundations of Nutrition (1927) Rose
Chemistry of Food and Nutrition (3rd ed.) (1926) Sherman
Food Products (1924) Sherman
Nutritional Physiology (5th ed.) (1924) Stiles

Health Education

Personal Hygiene for Nurses (1924) Bunker and Turner
Body Mechanics and Health Thomas and Goldthwait
Personal Hygiene Applied (2nd ed.) (1925) Williams
Health Education: A Program for Schools (1926) Wood
Health Training in Schools (8th ed.) (1927) Dansdill
Cleanliness and Health (1926) Turner and Collins
Health (1924) Turner and Collins
Healthy Living Vol. I & II (1924) Winslow
A Health Speakers Handbook Galdston

NEWS NOTES FROM THE FIELD

Physicians Licensed

Hartford, Kalin, Jacob I, 107 Mountford Street.
Meriden, Hall, William Edward, 5 Washington Heights.

Health Officers Appointed

Hartford County Health Officer, Daniel A. Markam, Esq. has appointed John H. Davies, M.D. health officer of Farmington, and Laurence A. Cushman, M.D. health officer of West Hartford, succeeding Dr. James A. Davis.

Litchfield County Health Officer, William W. Bierce, Esq. has appointed J. S. Chaffee, M. D. acting health officer of Salisbury during the absence of Dr. Bissell, and Robert C. Sellew, M. D. as acting health officer of New Canaan during the illness of Dr. Lee.

Windham County Health Officer, William A. King, Esq. has announced the appointment of A. D. Marsh, M.D. health officer of Hampton to fill the unexpired term of Dr. Erel Guidone.

Public Health Nursing

Westbrook is the first town to start a new public health nursing service under the new state law which gives state aid in proportion to the amount of town tax receipts. Westbrook has appropriated its pro rata share for this service, a public health nurse has been appointed, and the work is now functioning.

The town of Cornwall has made application for the subsidy for public health nursing, its share having already been appropriated.

Child Hygiene

The fifty-first well child conference functioning under the State Department of Health and the local community, was opened in Glastonbury on October 25th. One hundred and seven children were examined, a number which taxed to the utmost the physicians, nurses and lay helpers who were sponsoring this activity.

While for the most part the group represented a fairly healthy average there were 71 defects found, 26 of these being of sufficient importance to refer to their family physicians.

Another new conference will be opened in November in Guilford.

Diphtheria Immunization

With the announcement of an increase in diphtheria cases many towns in Connecticut have been stimulated to an active immunization campaign.

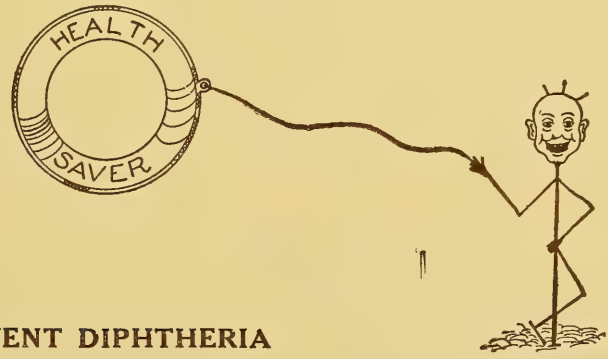
To further this Bristol held a most successful mass meeting at which the "whole town turned out". This is being followed up by further education of the public in diphtheria prevention through the use of the diphtheria film "New Ways for Old".

Other towns contemplating such campaigns are East Hampton, Seymour, Farmington and Windsor.

Joint Health Meeting

An interesting program has been announced for early November when the Connecticut Public Health Association and the Connecticut Valley Branch of the Society of American Bacteriologists are to hold a joint meeting at New Haven.

Tuberculosis will be emphasized at both sessions; the afternoon program being a symposium on the subject of tuberculosis control, while at the evening meeting allied subjects having a direct bearing on tuberculosis will be discussed.



PREVENT DIPHTHERIA

BY THE USE OF

TOXIN ANTITOXIN

IT SAVES LIVES

Vital Statistics

MONTH OF SEPTEMBER

TOTALS FOR FIRST NINE MONTHS OF THE YEAR, 1927, 1926, 1925

Year	Births	Birth Rate*	Marriages	Mar. Rate*	Deaths	DeathRate*
1927	21,089	17.7±.1	8656	7.3±.1	12,519	10.5±.1
1926	22,365	19.1±.1	9063	7.7±.1	14,004	12.0±.1
1925	22,642	19.7±.1	9027	7.8±.1	13,224	11.5±.1

*Rate on annual basis, per 1,000 population

Above is given the experience of the first nine months of the year, showing the accumulated totals, together with the rates and the fluctuations due to pure chance associated with the rates.

It is at once apparent that there is a great reduction in the birth rate; so great indeed that it cannot be accounted for as a mere chance decrease. There are no doubt many contributing causes back of the reduction. For one thing, the marriages are decreasing, but by hardly an amount large enough to account for the entire decrease in births.

The deaths show the most encouraging feature of the table above. In actual numbers, 1927 is 1485 below 1926. The death rate is 1.5 points lower for 1927. It may be safely said that this reduction is truly phenomenal. Barring accidents or catastrophe the year 1927 should give a death rate lower than any ever experienced by the state.

Births

Records of 2201 births were received, 179 lower than the 2380 reported in 1926. The rate of 16.7 is exceptionally low. Last month the rate was 17.9. Certainly there is no simple way of accounting for this decrease. Vital statistics are affected by many causes which are in general difficult to summarize. There is at present no great social conflict to blame. Some years ago we had the Great War as a haven to fly to when placing blame — and advantage of this retreat was freely taken. Neither is there any financial depression now. Well, whatever the cause, it is a very effective one. In fact, it is so effective that it is perhaps remarkable that it is not self evident.

Of the towns over 5,000 in population 9 reported an increase in the births for 1927 over 1926. These towns, with their increases and chance fluctuations, are:

Ansonia	24±6	New Britain	19±15
East Hartford	24±6	Norwich	10±11
Groton	12±5	Stratford	11±6
Hamden	13±6	West Hartford	20±6
		West Haven	11±7

When an increase or decrease is two or more times its chance fluctuation, such a change is said to be significant. Thus, the increase above for Ansonia is 24, which is 4 times its chance deviation of 6. With this criterion it will appear that the increases for Ansonia, East Hartford, Groton, Hamden, Stratford and West Hartford are significant. The word significant is used in the sense that the increase is not one which could have arisen from chance variation — some other agency or agencies must be in operation.

In the cases of significant increase above it is not difficult to discover the cause. Starting in January 1927 all births have been allocated for residence of the mother. If the birth of a child occurred in New Haven, say, for a mother whose residence is in Ansonia, such birth is counted in Ansonia. A year ago this rule was not in operation.

It will be immediately apparent that this system of allocation is to have great effect. The larger towns with hospital facilities will in the main suffer a decrease in the number of births when compared with figures of a year ago. The smaller towns will gain in the transfer.

Therefore all the increases above are significant of the new system rather than of any natural increase.

Records of 79 stillbirths were received. Including these among the 2201 living births gives a total of 2280. From this it will appear that the stillbirths occurred at the rate of 34.6 per 1,000 total births. In 1926 the stillbirths appeared at the rate of 33.7 per 1,000 births. No change of moment.

The sex distribution was rather remarkable. There were 28 females and 51 males, giving the very high sex ratio of 182 males to 100 females. This is rather unusually high, and would be exceptionally interesting, provided there were a great number of stillbirths. The small number of births and stillbirths makes the significance rather untrustworthy.

Deaths

There was a very small increase in the number of deaths reported, 1257 for 1927 against 1253 a year ago. The rates for 1927 and 1926 are 9.5 and 9.6 respectively. Again the omens seem favorable for a record year. The record low rate for the year is 11.3 established in 1924. With the extremely favorable start it seems certain that a new record will be established.

With reference to certain diseases for 1927 and 1926 the following table has been prepared to show increase and decrease.

Cause of Death	1927	1926	Increase	Decrease
Diseases of the heart	225±15	195±14	30±20	....
Epidemic Encephalitis	2±1	6±2	....	4±3
Pneumonia undefined	2±1	1±1	1±2	....
Typhoid Fever	4±2	4±2	....	....
Measles	0	0	....	....
Scarlet Fever	1±1	1±1	....	....
Whooping Cough	1±1	4±2	....	3±2
Diphtheria	3±2	0	3±2	....
Influenza	11±3	2±1	9±4	....
Tuberculosis, pulmonary	64±8	62±8	2±11	....
Tuberculosis, other forms	10±3	6±2	4±4	....
Cancer	147±12	136±12	11±17	....
Cerebrospinal meningitis	0	0	....	....
Poliomyelitis	6±2	1±1	5±3	....
Lobar pneumonia	26±5	21±4	5±7	....
Broncho pneumonia	28±5	25±5	3±7	....
Diarrhea and Enteritis under 2	15±4	45±7	....	30±8
Puerperal diseases	10±3	9±3	1±4	....
Accident	95±10	105±10	....	10±14
Suicide	20±4	19±4	1±6	....
Homicide	4±2	4±2	....	....
Other causes	583±24	607±25	....	24±35
Total	1257±35	1253±35	75	71

The list of increases at first sight looks formidably long. But analyzing the increases with respect to their significance, there are only 2 which are of significance — the increase of 9 ±4 for influenza and 5±3 for poliomyelitis. Were it not for the fact that there were numerous cases of poliomyelitis, even this increase might not be considered of moment from the purely mathematical point of view.

The decreases are few, but one is of tremendous significance. It is the decrease in deaths due to diarrhea and enteritis under 2 years of age. This value is 30±8. Last month it was 37±9. In two months this cause of death has been reduced by 67 deaths. This is indeed a remarkable saving of infant lives.

The infant mortality rate is of interest. The rate is 57.1 and is the lowest to appear in the last 6 years for September. Last month it was also low, being 51.5. There is evidence therefore that the infant mortality rate may be lower for 1927 than in any other year.

There was no decrease in deaths due to automobile accidents — neither was there an increase: 39 deaths from this cause were reported in 1927 and 1926.

FOR SIX YEARS—SEPTEMBER 1927

CONNECTICUT	1922	1923	1924	1925	1926	1927
BIRTHS *Birth Rate*	2687 22.3	2618 21.3	2581 20.6	2373 18.6	2380 18.3	2201 16.7
MARRIAGES *Marriage Rate*	1318 10.9	1555 12.6	1352 10.8	1383 10.8	1472 11.3	1320 10.0
DEATHS *Death Rate*	1216 10.1	1220 9.9	1223 9.8	1289 10.1	1253 9.6	1257 9.5
COMMUNICABLE DIS.* DEATHS *Per Cent to Total Deaths*	108 8.9	114 9.3	115 9.4	115 8.9	74 5.9	90 7.2
DEATHS UNDER 1 YEAR *Rate Per 1,000 Births*	171 64.7	195 75.9	177 66.8	176 70.9	177 73.6	135 57.1

*Includes Typhoid Fever, Measles, Scarlet Fever, Whooping Cough, Diphtheria, Tuberculosis Pulmonary, Cerebrospinal Meningitis, Poliomyelitis, Influenza.

1927 promises to be a record low death rate year not only for Connecticut but also for the entire nation.

So far this year the state rate is 10.5. Last year it was 12.0.

Births, Marriages and Deaths

Statistics
September, 1927

	Population Est. as of July 1, 1927 Based on U. S. Census	TOTALS				DEATH RATES			AGE GROUPS		
		Births	Stillbirths	Marriages	Deaths	All Causes (per 1,000 population)	Tuberculosis (per 1,000 population)	Children under 1 year (per 1,000 births)	Under 1 year	1 to 5 years	65 years and over
State of Connecticut	1,586,435	2201	79	1320	1257	9.5	0.5	57.1	135	38	487
Ansonia	19,548	24	.....	16	11	6.8	.....	.....	.....	.....	5
Branford	7,073	12	1	14	6	10.2	.....	244.9	2	.....	2
Bridgeport	174,890	235	17	123	103	7.1	0.1	39.3	10	6	31
Bristol	26,087	51	1	25	21	9.7	.....	71.0	4	.....	8
Danbury	21,931	34	1	13	25	13.7	.....	22.9	1	.....	16
Derby	12,963	12	1	9	9	8.3	.....	.....	.....	1	3
East Hartford	14,311	32	1	16	10	8.4	0.8	160.0	2	.....	4
Enfield	13,241	19	.....	14	5	4.5	.....	.....	.....	.....	1
Fairfield	15,541	14	.....	5	13	10.0	0.8	179.1	2	1	5
Glastonbury	6,206	13	.....	3	1	1.9	.....	.....	.....	.....	1
Greenwich	26,373	40	2	65	22	10.0	.....	23.7	1	1	13
Groton	11,326	18	.....	8	9	9.5	.....	.....	.....	2	3
Hamden	10,718	23	.....	9	14	15.7	.....	70.2	1	1	7
Hartford	168,258	299	5	128	136	9.7	0.4	66.7	23	5	48
Killingly	9,384	15	.....	12	7	9.0	.....	68.9	1	.....	3
Manchester	21,992	34	4	17	13	7.1	.....	30.6	1	.....	4
Meriden	36,807	41	2	31	30	9.8	1.3	68.5	4	.....	12
Middletown	22,932	16	2	14	19	9.9	.....	41.5	2	.....	5
Milford	14,673	14	.....	9	16	13.1	.....	.....	.....	.....	6
Naugatuck	16,829	14	.....	14	7	5.0	0.7	.....	.....	1	1
New Britain	71,068	115	6	51	45	7.6	0.7	76.5	10	2	11
New Haven	184,727	244	9	209	125	8.1	0.7	45.3	14	4	46
New London	30,149	33	2	28	33	13.1	2.0	.....	5	.....	10
Norwalk	30,173	54	3	25	29	11.5	0.8	.....	3	.....	15
Norwich	30,689	64	2	36	31	12.1	0.8	.....	5	.....	12
Plainfield	8,818	10	1	7	1	1.4	.....	.....	.....	.....	.....
Plainville	5,064	2	.....	.....	1	2.4	2.4	.....	.....	.....	.....
Plymouth	6,459	7	.....	4	4	7.4	.....	148.1	1	.....	3
Putnam	9,220	12	.....	16	9	11.7	.....	66.3	1	1	3
Seymour	8,321	7	.....	4	6	8.7	1.4	.....	.....	.....	2
Shelton	11,699	15	.....	7	6	6.2	1.0	.....	.....	.....	3
Southington	9,925	6	1	7	9	10.9	.....	139.5	2	2	.....
Stafford	5,472	11	1	4	6	13.2	.....	.....	.....	.....	3
Stamford	48,515	89	3	56	31	7.7	.....	43.0	4	.....	8
Stonington	11,041	4	.....	9	14	15.2	.....	.....	.....	1	7
Stratford	17,451	24	.....	4	16	11.0	0.7	421.1	6	.....	5
Thompson	5,226	4	.....	6	3	6.9	2.3	.....	.....	.....	2
Torrington	25,316	39	.....	15	13	6.2	.....	49.4	2	1	1
Vernon	8,751	14	.....	11	7	9.6	1.4	75.9	1	.....	4
Wallingford	12,659	11	.....	9	10	9.5	0.9	.....	.....	.....	7
Waterbury	105,960	111	9	74	77	8.7	0.6	26.9	5	3	16
Watertown	7,506	12	.....	10	5	8.0	.....	151.9	1	1	2
West Hartford	11,908	30	.....	10	18	18.1	.....	71.0	1	.....	9
West Haven	18,834	30	.....	13	13	8.3	.....	32.6	1	.....	4
Westport	5,772	8	1	2	1	2.1	.....	.....	.....	.....	.....
Wethersfield	5,264	3	.....	.....	5	11.4	.....	.....	.....	.....	3
Winchester	9,109	1	.....	.....	6	7.9	.....	.....	.....	.....	4
Windham	14,418	23	.....	11	12	10.0	.....	.....	.....	.....	6
Windsor	6,732	9	.....	3	7	12.5	.....	421.1	2	.....	2
Towns under 5,000	209,106	227	4	144	200	11.5	0.7	132.2	17	5	102
Other States		22	.....	.....	37	.....	.....	.....	.....	.....	19

DEATHS FROM IMPORTANT CAUSES

Diseases of the Heart	Encephalitis Epidemic	Pneumonia Undefined	Typhoid Fever	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Influenza	Tuberculosis-Pulmonary	Tuberculosis Other forms	Cancer	Meningitis-Cerebrospinal	Poliomyelitis	Pneumonia—Lobar	Pneumonia—Broncho	Diarrhoea-Enteritis Under 2	Puerperal Diseases	Accident	Suicide	Homicide	Institutional Deaths	Non-resident Deaths
225	2	2	4	.....	1	1	3	11	64	10	147	.....	6	26	28	15	10	95	20	4	482	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....	2	.....
1	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....
16	.....	1	.....	.....	.....	.....	1	.....	2	1	9	.....	.....	3	1	1	.....	10	5	.....	44	.....
5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	.....	1	.....	1	1	.....	4	.....
5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	.....	.....	.....	.....	.....	.....	2	1	2	7	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	2	.....	.....	4	.....
.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	2	.....	.....	.....	1	.....	1	1	1	.....	4	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
1	.....	.....	.....	.....	.....	.....	1	.....	1	.....	2	.....	.....	.....	1	.....	.....	1	.....	.....	3	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
3	.....	.....	1	.....	.....	.....	.....	1	.....	.....	8	.....	.....	1	.....	.....	.....	2	.....	.....	8	.....
3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	1	.....	.....	.....	2	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	1	1	.....	.....	5	.....
24	.....	.....	.....	.....	.....	1	.....	1	6	.....	17	.....	.....	2	3	6	1	13	.....	2	71	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1	1	.....	.....	.....	.....	1	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	.....	1	.....	1	.....	.....	5	.....
4	.....	.....	.....	.....	.....	.....	.....	.....	4	1	1	.....	.....	.....	1	.....	.....	2	.....	.....	13	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	4	.....	.....	.....	.....	.....	.....	1	1	.....	9	.....
2	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	.....	.....	5	.....
3	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	2	.....
5	1	.....	.....	.....	.....	.....	.....	.....	4	1	7	.....	.....	.....	2	1	1	1	1	.....	11	.....
25	.....	1	.....	.....	.....	.....	.....	1	10	.....	13	.....	1	6	3	1	1	10	.....	.....	60	.....
7	.....	.....	.....	.....	.....	.....	.....	.....	5	.....	4	.....	1	1	.....	.....	.....	2	1	.....	13	.....
4	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	2	.....	.....	.....	.....	.....	.....	5	.....	.....	10	.....
8	.....	.....	.....	.....	.....	.....	.....	1	2	1	4	.....	.....	.....	.....	.....	.....	2	.....	.....	13	.....
.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....	.....	.....	1	.....	.....	3	.....
1	.....	.....	.....	.....	.....	.....	1	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	3	.....	.....	2	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1	.....	.....	.....	.....	.....	2	.....
7	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	3	.....	.....	1	.....	.....	.....	2	1	.....	11	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	.....	.....	.....	.....	.....	.....	2	.....	.....	2	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....	5	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	2	.....	.....	6	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	.....
3	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	2	.....	.....	.....	.....	.....	.....	.....	1	.....	8	.....
8	.....	.....	.....	.....	.....	.....	.....	.....	5	1	13	.....	1	3	1	.....	.....	8	1	.....	32	.....
2	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
3	.....	.....	.....	.....	.....	.....	.....	1	.....	1	2	.....	.....	.....	2	1	1	.....	1	.....	7	.....
5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	1	.....	2	.....
3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	3	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	4	.....
42	.....	.....	2	.....	.....	.....	.....	2	12	3	15	.....	1	2	8	1	1	13	4	.....	67	.....
9	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	3	.....	.....	3	1	.....	.....	.....	.....	.....	17	.....

Laboratories

SUMMARY OF BUREAU ACTIVITIES
OCTOBER, 1927

DIAGNOSTIC EXAMINATIONS

	+	—	?	Unclassified	Total	
Typhoid	8	242	1	....	251	
Paratyphoid A	....	251	....	....	251	
Paratyphoid B	....	251	....	....	251	
Diphtheria	71	858	....	....	929	
Diphtheria Virulence	16	40	....	....	56	
Vincent's Angina	8	646	....	....	654	
Hemolytic Streptococci	19	634	....	....	653	
Tuberculosis	23	153	....	....	176	
Syphilis	510	2142	175	....	2827	
Gonorrhoea	32	85	....	....	117	
Pneumonia	....	1	....	....	1	
Malaria	....	1	....	....	1	
Rabies	8	5	....	....	13	
Special Specimens	2	11	....	55	68	6,248

CHEMICAL AND BACTERIOLOGICAL

Milk samples	336	
Cream samples	1	
Water samples	321	
Ice samples	1	
Sewage samples	18	
Sea Food samples	11	
Clinical thermometers	174	862
Total examinations made		7,110

Increased Laboratory Service on the Kahn Test

The Kahn precipitation test for the laboratory diagnosis of syphilis has been gaining in popularity for several years and has now been adopted as the official test of several large laboratories throughout the country. Additional equipment is being ordered for our laboratories and it is expected that about the beginning of the year the Bureau of Laboratories will be in a position to carry out this test on a much larger scale. One distinct advantage will be promptness in reporting, as the test can be carried out daily and the reports ordinarily mailed within five hours after receipt of the specimen.

This does not mean that the Wassermann test will be discontinued. The Wassermann test will be carried out for any physician in the state requesting it. It may not be possible to make both tests on a single specimen because of lack of appropriation for laboratory personnel. We will be able to serve those physicians, and their number appears to be rapidly increasing, who request the Kahn test on their specimens.

Preventable Diseases

INCIDENCE OF DISEASE FOR MONTH OF OCTOBER, 1927

(As compared with previous years)

A comparison of the morbidity reports received during the month of October, 1927, with the corresponding month for the years 1922, 1923, 1924, 1925 and 1926.

	Average 1922-1926 for Oct.	Mean 1922-1926 for Oct.	1922	1923	1924	1925	1926	1927
Cerebrospinal Meningitis ..	4	3	2	8	4	3	3	5
Diphtheria	192	173	354	203	173	126	108	143
Encephalitis Epidemic	2	2	....	2	6	1	2	2
Measles	133	125	215	241	24	125	52	47
Poliomyelitis	11	10	10	17	19	3	8	42
Scarlet Fever	186	201	212	201	247	134	139	114
Smallpox	....	....	....	....	....	....	....	....
Typhoid Fever	58	41	41	60	30	42	17	18
Tuberculosis Pulmonary	120	122	131	129	122	108	112	146
Whooping Cough	164	161	219	100	204	161	134	157

A comparison of the morbidity of these diseases for the two preceding months, August and September with the October record is as follows:

	August	September	October
Cerebrospinal Meningitis	1	3	5
Diphtheria	80	78	143
Encephalitis Epidemic	3	3	2
Measles	42	27	47
Poliomyelitis	52	62	42
Scarlet Fever	38	64	114
Smallpox	....	....	....
Typhoid Fever	13	23	18
Tuberculosis Pulmonary	96	115	146
Whooping Cough	191	180	157

Cases of Other Reportable Diseases

Anthrax	1	Paratyphoid Fever	2
Chickenpox	220	Septic Sore Throat	5
Conjunctivitis Infectious ..	2	Tetanus	1
Dysentery (bacillary)	2	Trichinosis	1
Encephalitis Epidemic	2	Chancroid	12
German Measles	6	Gonorrhoea	257
Influenza	11	Syphilis.....	192
Malaria	1		
Mumps	66	Total	781

Cases of Occupational Diseases

Acute Dermatitis	1	Dermatitis, from Fulminate	
Anthrax	1	of Mercury	8
Chronic Mercurial poisoning	3	Total	13

Cases of Certain Reportable Diseases

October, 1927	Population Est. as of July 1, 1927	Typhoid Fever	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Meningitis Cerebrospinal	Poliomyelitis	Pulmonary Tuberculosis	Other Forms Tuberculosis	Pneumonia Lobar	Broncho-Pneumonia	Other Com. Diseases
State Total	**1,586,435**	**18**	**47**	**114**	**157**	**143**	**5**	**42**	**146**	**8**	**81**	**55**	**781**
NEW HAVEN CO.	**475,419**	**8**	**25**	**15**	**81**	**31**	**2**	**9**	**45**	**1**	**11**	**16**	**211**
New Haven	184,727	4	15	8	16	1		1	19	1	4	3	151
Waterbury	105,960			3	4	10	1	2	14		3	5	20
Meriden (city and town)	36,807			1	5	1			1		2	4	12
Ansonia	19,548					2							7
West Haven	18,834	1			2	4		1	9				5
Naugatuck	16,829					1		2	2				1
Wallingford (town and boro)	12,659											1	
Milford	14,673							1					
Derby	12,963	2		1		1							
Hamden	10,718			2	8		1				2	1	2
Branford (town and boro)	7,073												2
Seymour	8,321					10							2
Towns under 5,000	26,307	1	10		46	1		2				2	9
FAIRFIELD CO.	**379,505**	**2**	**8**	**29**	**32**	**45**	**1**	**5**	**37**	**1**	**18**	**7**	**96**
Bridgeport	174,890		1	13	1	26			25	1	10	3	33
Stamford (city and town)	48,515	2		3	22				3		2	1	10
Norwalk	30,173			3		4		3	1				7
Danbury (city and town)	21,931			2			1		2		2		6
Greenwich (town and boro)	26,373		7	5	1	12		2	3		1		1
Stratford	17,451					3					1		2
Fairfield	15,541				1				1			1	17
Shelton	11,699			2									5
Westport	5,772								1			1	2
Towns under 5,000	27,160			1	7				1		2	1	13
HARTFORD CO.	**402,344**	**3**	**7**	**22**	**15**	**53**	**1**	**10**	**44**	**4**	**36**	**17**	**322**
Hartford	168,258	1	3	7	6	30		1	30	2	17	8	137
New Britain	71,068	1		2	1	2			4		6	7	23
Bristol (city and town)	26,087		1	6	1	2	1	1	2		4		8
Manchester	21,992		1			8			1		1		7
Enfield	13,241		1	1		2					2		3
East Hartford	14,311	1			3	2		1	1		1		7
Southington (town and boro)	9,925			3							1		1
West Hartford	11,908				2	2		2	2	2	3	1	56
Windsor	6,732							1	1				6
Glastonbury	6,206												1
Wethersfield	5,264			1	2	1							6
Plainville	5,064								1				
Towns under 5,000	42,288		1	2		4		4	2		1	1	17
NEW LONDON CO.	**114,930**	**2**		**28**	**16**	**6**		**3**	**13**	**1**	**6**	**5**	**44**
Norwich (city and town)	30,689	2		21	1	5		1	4	1	1	1	17
New London	30,149			5	14				2			2	5
Stonington (town and boro)	11,041					1		1					12
Groton (town and boro)	11,326			2				1			1	1	2
Towns under 5,000	31,725				1				7		4	1	8
LITCHFIELD CO.	**80,900**	**1**		**4**	**2**	**4**	**1**	**3**	**1**		**3**	**2**	**15**
Torrington (town and boro)	25,316												
Winchester (inc. Winsted)	9,109			1		1		1					
Plymouth	6,459	1		2		1	1				2		4
Watertown	7,506												
Towns under 5,000	32,510			1	2	2		2	1		1	2	11
WINDHAM CO.	**56,258**	**1**		**15**	**2**	**3**		**7**	**2**	**1**	**2**	**2**	**13**
Windham (inc. Willimantic)	14,418			6				1			1		5
Putnam (city and town)	9,220				2	1		1			1	1	2
Plainfield	8,818	1		1					1				
Killingly (inc. Danielson)	9,384			2				2	1				
Thompson	5,226			2		2							2
Towns under 5,000	9,192			4				3		1		1	4
MIDDLESEX CO.	**49,279**		**7**	**2**	**4**	**1**		**3**	**4**		**4**	**5**	**75**
Middletown (city and town)	22,032		4	1	3	1		2			3	5	70
Middletown State Hospital									3				1
Towns under 5,000	26,347		3	1	1			1	1		1		4
TOLLAND CO.	**27,800**	**1**			**5**			**2**			**1**	**1**	**5**
Vernon (inc. Rockville)	8,751										1		3
Stafford (town and boro)	5,472	1						1					1
Towns under 5,000	13,577				5			1					2

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State of Connecticut Health Bulletin

"For a Clean State and a Healthy People"

Vol. 41 December, 1927 No. 12

THE STATE DEPARTMENT OF HEALTH

EXTENDS CORDIAL

NEW YEAR GREETINGS

TO

ALL HEALTH WORKERS IN THE FIELD

WHOSE EFFORTS BID FAIR TO MAKE THIS

CONNECTICUT'S HEALTHIEST YEAR

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STANLEY H. OSBORN, M. D., C. P. H., Commissioner

ISSUED BY
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HARTFORD

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This Issue Contains

Bacterium Abortus Infection

Mouth Hygiene Work in North Canaan

What is a Laboratory Examination?

Summary of Laboratory Activities for November, 1927

Births, Deaths and Marriages for October, 1927

Incidence of Preventable Diseases for November, 1927

Index of Volume 41, 1927 Monthly Health Bulletin

CONNECTICUT

HEALTH BULLETIN

Vol. 41 December, 1927 No 12

Issued Monthly by the

STATE DEPARTMENT OF HEALTH

BACTERIUM ABORTUS INFECTION IN MAN: THE RESULTS OF THE AGGLUTINATION TEST APPLIED TO MORE THAN 10,000 HUMAN SERA*

by James G. McAlpine, M. A., Ph. D.
Storrs Agricultural Experiment Station

and Friend Lee Mickle, A. B., M. S.

Since the work of Evans (1918) proved the close relationship between **Bacterium abortus** and **Bacterium melitensis,** the possibility that **Bacterium abortus** might be pathogenic for human beings has been constantly present in the minds of many investigators. During the past two years approximately fifty cases in which **Bacterium abortus** has been incriminated as the causative factor have been reported in the United States. In all these patients, the characteristic symptom has been an intermittent type of fever somewhat resembling typhoid. Very recently one case of infection of the genito-urinary tract of a woman has been cited by Belyea, (1927).

For several years, the Storrs Agricultural Experiment Station has tested by the agglutination and complement fixation reactions a large number of dairy herds in this state. From the data so obtained, it appears that at least 90 per cent of the herds are harboring **Bacterium abortus.** Since the mode of spread of this type of disease has been assumed to be through the ingestion of raw milk from infected cows, it would seem that if the organism itself were pathogenic there should be a fairly large number of human beings in the general population infected with the disease. These may have been diagnosed as suffering from other cinical entities, but the agglutination test applied as a routine procedure in a large number of human sera should give more information on this point.

*Abstract of a paper read before the Laboratory Section of the American Public Health Association, Cincinnati, Ohio at the 56th annual meeting October 20, 1927.

The only method which seemed feasible was the application of the agglutination test using a **Bacterium abortus** antigen to the human sera which were received at the State Department of Health, Bureau of Laboratories, for the Wasserman reaction. Basset-Smith, (1925) tested 130 Wasserman samples in England and found two sera giving positive agglutination in 1 in 40. The objection which might be advanced that these samples coming from persons who showed no real clinical symptoms of **Bacterium melitensis** infection might negate the results of the experiment, of course, is valid but inasmuch as it seemed impossible to obtain numerous sera by any other means, it was the method employed in this work. The results obtained should give some idea of the number of persons in the general population of Connecticut whose sera react to the agglutination test.

The serum was separated from the clot as soon as it was received at the Laboratories and after the Wasserman and Kahn reactions were run, it was preserved in the icebox until the agglutination test could be performed. The antigen employed was made from four strains of **Bacterium abortus** coming from different sections of the country whose agglutinability had been carefully checked. The diluted antigen was distributed in small test tubes in 2cc. amounts and the serum added to make smaller dilutions of 1 - 25, 1 - 50, 1 - 75 and 1 - 100. The results were recorded on the 4+ scale with 4+ indicating complete flocculation and clearing, 3+ and 2+ indicating partial reactions and 0 a non-reaction. When ever a serum showed 4+ reactions through the 1 - 100 dilution a questionnaire was sent out to the attending physician. This asked for the sex, age, and occupation of the patient, a description of the symptoms; whether he had used milk either raw or pasteurized; and requested a second sample and, if possible, a blood cuture. Whenever a second sample was received the dilutions were increased to 1 - 200.

Experimental

From November, 1926 to July, 1927 a total of 10,157 human sera were tested. Of this number 63 or about 0.6 per cent showed practically a complete reaction in the four dilutions used and questionnaires were sent to the attending physicians in all but one case. Up to date answers have been received from 38 of these and second samples were run on 14. Only one of these showed no reaction by the agglutination test.

There were 21 males and 17 females in 38 cases in which more or less complete data are at hand. Of the 17 women, one was in the hospital for parturition, three had previously suffered

from two or more abortions, and one was diagnosed as having uterine ulceration. These 5 cases are significant if Belyea's work on the infection of the genito-urinary tract is considered.

The questions on the source and amount of the milk ingested were answered sufficiently for analysis in 29 of the 38 questionnaires. Eighteen of the persons who exhibited a strong reaction to the agglutination test had partaken of raw milk. Of these 7 ingested cow's milk only occasionally, 5 partook of it in large quantities and 6 were moderate users. Only 5 of the cases used pasteurized milk and in 6 the source of milk was unknown.

Of the remaining 10,094 samples, 103 showed a partial reaction in three or more dilutions, 94 in the 1 - 25 and 1 - 50 dilutions and 157 in the first or 1 - 25 tube only. No questionnaires were sent on these sample numbers because it was believed that many of these might be non-specific reactors.

Discussion

The experimental data presented here must be considered as merely a preliminary report. It was designed to gain some idea, if possible, of the prevalence in the general population of persons whose sera reacted in fairly high dilutions to the agglutination test with **Bacterium abortus** antigen. The fact that these sera were not selected but were taken as a matter of routine by some hospitals and also from patients for suspected syphilis gives some added significance to the results obtained.

There are several possible explanations for the presence of agglutinins for **Bacterium abortus** in human sera. First, the patients might be harboring an active focus of infection with **Bacterium abortus** and the antibodies would be constantly formed under the stimulation of the growing bacterial antigen. In these cases, it would be expected that reactions to the agglutination test would be in fairly high dilutions and consistent. The persons themselves would either exhibit symptoms of undulent fever or they might remain normal as so often happens in carrier states in typhoid. Secondly, agglutinins might be present in large quantities in cases recently recovered from an active infection with **Bacterium abortus** but these reacting bodies would gradually disappear and the subsequent tests should become weaker. Thirdly, agglutinins for **Bacterium abortus** are present in large quantities in the milks of some cows and persons ingesting these milks in moderate amounts might react to the test owing to the passive absorption of these reacting bodies into the blood stream. This last reaction would be transitory unless the milk drinking was continued over a long period. The fact that no positive blood cultures

were obtained does not necessarily indicate that persons of the first class were absent in this survey inasmuch as one negative blood culture does not preclude the presence of **Bacterium abortus** in an individual.

The results indicate that only about 0.6 per cent of the sera tested show a complete reaction in the 1 - 100 dilution. Of these, only a relatively small number showed any symptoms which simulated those of Malta fever. Provided the agglutination test has any significance, the number of persons in the general population in Connecticut infected with **Bacterium abortus** must be relatively small. It is significant that from 29 questionnaires in which data were given on the source of the milk supply, that 18 or about 62 per cent of the reacting persons were users of raw milk and only 18 per cent had ingested pasteurized milk. The source of the milk in 20 per cent of the cases was unknown and it is very probable that at least 50 per cent of these used raw milk. This fact should give an added reason for pasteurization of milk from tuberculous free herds, but with the present state of our knowledge on the value of the agglutination test and the relatively small numbers of the individuals involved as indicated by these results, it does not seem wise to enforce compulsory pasteurization of the products from abortion infected farms.

MOUTH HYGIENE WORK IN NORTH CANAAN

By Dorothy L. Miller, D. H.

Division of Mouth Hygiene

For some time past the school authorities and the Visiting Nurse Association of Canaan have been interested in school dental hygiene. Last spring the visiting nurse invited the dental hygienist to help with instruction in dental hygiene.

This created so much interest that Canaan asked that the dental hygienist be allowed to clean the mouths of the children in all of its schools.

On September seventh a clinic was set up in Center School in Canaan, and preparations were made to go on with the work the following day. The program consisted of tooth brush advice given to the entire school, a free dental examination, given by the local dentist to the children, and a prophylactic treatment which consisted of the removal of all stains from the teeth, and polishing.

During the month of September the work continued in the Center School at Canaan and although there were many interruptions a great deal was accomplished. October saw Center School completed and one of the outlying districts, namely, Canaan Valley.

During these two months 199 children had their teeth cleaned, and 191 were examined by the dentist. The children received class room drills and talks and their parents received charts stating the necessity for further dental work.

In November the entire schools in the group were completed, namely, Sodom, District No. 5, and East Canaan.

The children throughout the schools were most responsive and interested in the work. After having had their teeth cleaned they seemed anxious to keep them so. Undoubtedly this one thing stimulated more interest than much talking would have done. They saw what an improvement it made in their looks and in the feeling of their mouths. After all, children possess more pride than grown-ups will sometimes admit.

This work should prove an inspiration to the children in this community for if dental, like other health habits, are formed early in life they will become routine. Having received this instruction when they are young these children will doubtless continue to care for their teeth during adult life.

A little remark made by one of the town druggists shows the local reaction to the work: "Never, since I started business have I sold as many tooth brushes or such a quantity of tooth paste to the children as I have since they had their teeth cleaned."

Summary

Three hundred and twenty-five children received instructions at talks.

Two hundred and ninety-six children had their teeth cleaned in five schools. The work included the first eight grades.

The local dentist gave eight half days, devoting his time to dental examinations. He examined 339 mouths and referred 287 of these children to dentists.

The defective temporary teeth found were 971 and 1179 defective permanent teeth, making 2150 total defective teeth.

Only 89 of the 339 children have regular dental care.

Five cases have been fully corrected. At least 10 others are being corrected.

Especial thanks are due to the local dentist who gladly gave the one-half day a week, which he ordinarily devotes to recreation, to a free examination of the children's mouths.

WHAT IS A LABORATORY EXAMINATION?

By Friend Lee Mickle

In line with up-to-date public health laboratory practice, the laboratory summary on page 268 shows the number of specimens received as well as the number of examinations made. It has gradually become recognized that the term "laboratory examination" is a very unsatisfactory one for comparing the work of one laboratory with another. For instance, in November the Bureau of Laboratories examined 189 samples of milk and that amounted to 189 examinations. In the Laboratories of this department an "examination" of a milk sample signifies all the laboratory work made on the sample but in some other laboratories in this state and in some outside of the state the bacterial count is considered an examination, the butter-fat determination another, the total-solids determination a third, and the test for dirt a fourth examination.

The term "specimen," defined to mean material collected for examination from a single source at a single time, is being considered a better unit for determining how well a laboratory serves its territory in comparison with any other laboratory using the same system. The number of actual "procedures" carried out in the laboratory on any specimen may be also of considerable interest for comparing the actual work done by two different laboratories or by the same laboratory at different times providing a definition of the term "procedure" is definitely settled upon. In the past the monthly bulletins and annual reports have recorded the number of examinations.

Laboratory records should be kept in such a manner that they show two distinct things—the relation of the work to the community and the kinds and volume of work actually done. One laboratory may do three times as much work as another on a given specimen and the records should reveal that fact, but should not confuse that information by making it appear to show more specimens examined than have actually been received.

A committee of the American Public Health Association and another from the association of State Laboratory Directors have recently been appointed to investigate the subject. The Bureau of Laboratories is represented on these committees. The work of the latter committee will be concerned with preparing forms for more uniform daily, monthly and annual reporting. The function of the former is to make these forms suitable for comparing the work of health laboratories.

Vital Statistics

MONTH OF OCTOBER

TOTALS FOR FIRST TEN MONTHS OF THE YEAR, 1927, 1926, 1925

Year	Births	Birth Rate*	Marriages	Mar. Rate*	Deaths	DeathRate*
1927	23,227	17.6±.1	9934	7.5±.1	13,791	10.4±.1
1926	24,749	19.0±.1	10489	8.0±.1	15,377	11.8±.1
1925	25,137	19.7±.1	10512	8.2±.1	14,674	11.5±.1

*Rate on annual basis, per 1,000 population

Each month recently the accumulated number of births, and the corresponding birth rate, shows a decrease. Last month the rate was 17.7; now it is 17.6. By analogy, next month it will be 17.5. Some time, presumably, the rate will change for a higher rate. It is a long way from a rate of 17.6 to a rate of, say, 25.0; yet that is what the rate was some 10 years ago. Already 1927 is some 1500 births lower than 1926 and roughly 2000 below 1925.

The marriages have fallen off by some 550, with a reduction in rate of 0.5 per 1000 population.

With regard to the deaths, as the year goes on, it is more and more apparent that 1927 is to be a banner year. Last month the rate was 10.5. This month it is 10.4. Looking at the other two years in the table above it will be observed that the rate in 1926 was 12.0 and in 1925 it was 11.5. These reductions are of great significance.

There are two remaining months to be received. And in general the mortality for November and December takes an upward swing—pneumonia starts in again grimly. But it seems well nigh inevitable now that 1927 will establish a record low death rate in the history of the state.

The year is at present over 1500 deaths lower than 1926. There are, of course, some delayed reports yet to be received. But as a rule they are too few to affect the rate markedly.

Births

Quite in line with the total decrease in births the month witnessed the lowest recording of births in the past six years, showing a maximum decrease of 420 below 1922 and a minimum decrease of 246 below 1925. The monthly rate for October was 16.2.

The average number of births for the month was 2425. From this it will be immediately apparent that 1927 is 187 below the average. The average rate over the period 1922-1927

is 19.25. The deviation of 1927 is, therefore, about negative 3.0. The standard deviation, which is the square root of the average sum of the deviation squared is 1.6. On the whole this is not an excessively high dispersion.

Of the towns over 5,000 in population, 19 reported more births in 1927 than in 1926. Some of these increases are of ten or more. Listing such will give the following tabulation:

East Hartford	10 ± 5	Stratford	23 ± 6
Fairfield	11 ± 5	West Hartford	27 ± 7
Hamden	13 ± 5	Windham	13 ± 5
Naugatuck	11 ± 5	Windsor	12 ± 4

As it turns out all of these increases are of statistical significance. The criterion for such a statement is based on the following: any change, either increase or decrease, will have associated with it a standard deviation, or dispersion, or fluctuation due to pure chance. Thus, for Stratford, the increase was 23 ± 6. The actual increase was 23. The chance increase was 6; or it might have been a **decrease.** Chance works either way. In the case under discussion the result was an increase. Whenever a number is at least twice its chance standard deviation, then such number is worthy of consideration as being significant. It will quite justly be said, "Significant of what?" Well, the answer is from this point **not** mathematical. It is, in general, not easily answered. There may be many factors bringing about the significance of the result. Mathematical statistics merely states that the result is of significance and worthy of confident analysis. Knowledge of all other conditions is now necessary.

To a stranger coming in contact with these figures above, it would probably not be immediately apparent why all the small towns, relatively speaking, were gaining in the number of births over the preceding year. Analysis would of course then bring a consideration of all the towns and it would be then apparent that the larger towns were losing. This would at least suggest that some readjustment was being effected. And such is the case. Since January of the present year all births are being recorded in the town where the mother resides—that is, recorded **statistically.** There is no change or transfer of actual records, merely a count. This will result in an increase of births for towns which have no hospital. The towns with hospital facilities will in general show a decrease. Therefore, it may be said that increases for 1927 over 1926 are not strictly comparable. The fluctuations, as we mentioned above, are greater than mere chance fluctuations. No doubt the same would be found to be true of the decreases in the larger towns—that they are greater numerically than mere chance reductions.

During the month 75 stillbirths were recorded, giving a total number of births 2213. Of this total, there were 33.7 still-

births per 1,000 total births. Last year there were 85 stillbirths among a total of 2469 or stillbirths occured at the rate of 34.4 per 1,000 total births. Both of these rates are about what the average experience produces, and there is very little difference between them.

Deaths

Copies of 1272 death certificates were received, a decrease of 101 below the 1373 reported in 1926. So again the state has experienced a favorable month compared with 1926. The death rate of 9.6 is the lowest to have been recorded in the last six years.

Analyzing the causes of deaths for a selected group and comparing 1927 with 1926 gives the following table:

Cause of Death	1927	1926	Increase	Decrease
Diseases of the heart	210±14	219±15	....	9±21
Epidemic Encephalitis	3±2	0	3±2	....
Pneumonia, Undefined	5±2	1±1	4±2	....
Typhoid Fever	5±2	1±1	4±2	....
Measles	0	0	....	....
Scarlet Fever	2±1	2±1	....	....
Whooping Cough	5±2	1±1	4±2	....
Diphtheria	9±3	6±2	3±4	....
Influenza	6±2	17±4	....	11±5
Tuberculosis, pulmonary	64±8	88±9	....	24±12
Tuberculosis, other forms	10±3	10±3	....	....
Cancer	173±13	152±12	21±18	....
Cerebrospinal Meningitis	1±1	1±1	....	....
Poliomyelitis	6±2	2±1	4±3	....
Lobar Pneumonia	38±6	34±6	4±8	....
Broncho Pneumonia	42±6	41±6	1±9	....
Diarrhea and Enteritis under 2	27±5	32±6	....	5±8
Puerperal Diseases	16±4	11±3	5±5	....
Accident	77±9	104±10	....	27±13
Suicide	13±4	22±5	....	9±6
Homicide	2±1	2±1	....	....
Other causes	558±24	627±25	....	69±34
Totals	1272±36	1373±37	53	154

A fair proportion of the increases above are of significance. Epidemic encephalitis, pneumonia undefined, typhoid fever and whooping cough show increases which while small are none the less worthy of note. The increase due to diphtheria is not of significance when October is considered by itself. But this increase if continued through the year would be of especial significance. There are certain indications that this is a year with diphtheria on the increase. It is as unnecessary to have diphtheria as it is for an infant to die of old age. Yet despite the treatment of prevention with toxin-antitoxin which is so simple, so free from danger and so certain of result, many still fail to avail themselves of this way

of protecting their children's lives and month after month the grim record shows a diphtheria mortality far too great.

There was some poliomyelitis in the state during the past few months. This is reflected by a slight increase in the mortality. With the coming of winter this will disappear—and in fact the figures show that it did not in the least reach alarming numbers.

There are three decreases which are worthy of note, influenza, pulmonary tuberculosis and accidental deaths—these are mathematically significant. For some months past a very favorable and significant reduction in diarrhoea in infants has been noted. The decrease above is 5±8 which quite apart from other months would probably not be considered worthy of note. But in view of the previous experience the reduction is a continuance of favorable mortality.

Of the accidental deaths, 34 were due to the automobile during the month compared with 33 a year ago.

The October brides again appeared, though not as many as in any October for the last six years. The humorist would note that the marriages exceeded the deaths and that this occurred in every year since 1922, except 1924.

FOR SIX YEARS—OCTOBER, 1927

CONNECTICUT	1922	1923	1924	1925	1926	1927
BIRTHS *Birth Rate*	2558 21.2	2449 19.9	2528 20.2	2495 19.6	2384 18.4	2138 16.2
DEATHS *Death Rate*	1323 11.0	1262 10.3	1417 11.3	1450 11.4	1373 10.6	1272 9.6
MARRIAGES *Marriage Rate*	1445 12.0	1514 12.3	1415 11.3	1485 11.6	1426 11.0	1278 9.7
COMMUNICABLE DIS.* DEATHS *Per Cent to Total Deaths*	143 10.8	123 9.7	135 9.5	104 7.2	118 8.6	98 7.7
DEATHS UNDER 1 YEAR *Rate Per 1,000 Births*	184 70.6	170 66.5	165 65.5	191 76.9	157 65.2	116 48.7

*Includes Typhoid Fever, Measles, Scarlet Fever, Whooping Cough, Diphtheria, Tuberculosis Pulmonary, Cerebrospinal Meningitis, Poliomyelitis, Influenza.

Statistics
October, 1927

	Population Est. as of July 1, 1927 Based on U. S. Census	TOTALS				DEATH RATES			AGE GROUPS		
		Births	Stillbirths	Marriages	Deaths	All Causes (per 1,000 population)	Tuberculosis (per 1,000 population)	Children under 1 year (per 1,000 births)	Under 1 year	1 to 5 years	65 years and over
State of Connecticut	1,586,435	2138	75	1278	1272	9.6	0.5	48.7	116	41	472
Ansonia	19,548	17		17	14	8.6	1.2				6
Branford	7,073	10	1	11	9	1.5	1.7	122.4	1		2
Bridgeport	174,890	220	6	105	87	6.0	2.1	11.8	3	4	34
Bristol	26,087	48	1	27	15	6.9		17.8	1	1	5
Danbury	21,931	39	1	23	26	14.2		22.9	1	1	9
Derby	12,963	16	2	12	8	7.4		57.8	2		2
East Hartford	14,311	16		15	14	11.7	0.8	160.0	2		5
Enfield	13,241	20		10	4	3.6	0.9				3
Fairfield	15,541	19	1	12	12	9.3	0.8	89.6	1		7
Glastonbury	6,206	4		2	2	3.9	1.9				2
Greenwich	26,373	32		64	27	12.3	1.4			1	12
Groton	11,326	8		9	9	9.5					6
Hamden	10,718	18			14	15.7				2	8
Hartford	168,258	256	8	139	141	10.1	0.4	69.6	24	8	38
Killingly	9,384	7		14	10	12.8	1.3	137.1	2		5
Manchester	21,992	26		18	21	11.5	0.5				11
Meriden	36,807	52	2	47	30	9.8		34.2	2	1	18
Middletown	22,932	27	2	14	18	9.4	1.6	41.5	2	2	7
Milford	14,673										
Naugatuck	16,829	16		17	10	7.1					4
New Britain	71,068	140	2	37	54	9.1	0.3	91.8	12	4	9
New Haven	184,727	241	14	165	140	9.1	0.4	42.0	13	1	50
New London	30,149	32	2	22	29	11.5	0.8	60.4	4		10
Norwalk	30,173	38	2	16	34	13.5		17.3	1	2	12
Norwich	30,689	45	1	24	25	9.8	0.4	48.2	3		5
Plainfield	8,818	10		4	8	10.9	1.4	93.0	1	1	2
Plainville	5,064	7			2	4.7		196.7	1		1
Plymouth	6,459	10	1	3	11	2.0		148.1	1	1	5
Putnam	9,220	13		9	9	1.2	2.6	66.3	1	1	2
Seymour	8,321	5		2	6	8.7	1.4				2
Shelton	11,699	12		4	10	10.3	1.0			1	3
Southington	9,925	19		12	5	5.0	1.2	69.8	1		2
Stafford	5,472	7	2	9	7	15.4		64.2	1		
Stamford	48,515	79	3	52	43	10.6	0.7	43.0	4	2	9
Stonington	11,041	8		11	7	7.6	1.1				4
Stratford	17,451	29		5	13	8.9		70.2	1		4
Thompson	5,226	2	1	1	5	11.5	2.3	324.3	2		1
Torrington	25,316	32	1	24	16	7.6	0.5	74.1	3		5
Vernon	8,751	7	1	9	4	5.5				1	1
Wallingford	12,659	12		9	11	10.4					7
Waterbury	105,960	123	10	61	76	8.6	0.5	32.2	6	1	23
Watertown	7,506	9		4	5	8.0				1	
West Hartford	11,908	36		10	20	20.2	2.0	213.0	3		12
West Haven	18,834	42	1	25	24	15.3		130.4	4		10
Westport	5,772	7	1	2	2	4.2	2.1				1
Wethersfield	5,264	9		10	8	18.2	2.3			1	2
Winchester	9,109	11		6	9	11.9					6
Windham	14,418	21	1	12	12	10.0				2	5
Windsor	6,732	14		3	8	14.3	1.8	210.5	1		3
Towns under 5,000	209,106	240	8	171	175	10.0	0.6	62.5	12	2	77
Other States		27			23						15

DEATHS FROM IMPORTANT CAUSES

Diseases of the Heart	Encephalitis Epidemic	Pneumonia Undefined	Typhoid Fever	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Influenza	Tuberculosis-Pulmonary	Tuberculosis Other forms	Cancer	Meningitis-Cerebrospinal	Poliomyelitis	Pneumonia—Lobar	Pneumonia—Broncho	Diarrhoea-Enteritis Under 2	Puerperal Diseases	Accident	Suicide	Homicide	Institutional Deaths	Non-resident Deaths
210	3	5	5	.....	2	5	9	6	64	10	173	1	6	38	42	27	16	77	13	2	485	.....
2	.....	1	.....	.....	.....	.....	.....	.....	2	.....	1	.....	.....	1	1	.....	.....	.....	1	.....	5	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1	.....	.....	2	.....	.....	4	.....
16	1	.....	.....	.....	.....	.....	1	1	2	2	13	.....	.....	3	4	.....	.....	6	.....	.....	35	.....
5	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	2	1	.....	.....	.....	1	1	1	.....	.....	8	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	4	.....	.....	2	.....	.....	.....	2	1	.....	9	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1	.....	.....	.....	5	.....
4	.....	.....	.....	.....	.....	1	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	4	.....	.....	.....	.....	.....	.....	1	.....	.....	4	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
4	.....	1	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	.....	1	.....	.....	1	4	.....	.....	9	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	1	.....	.....	1	.....	.....	4	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	.....	.....	.....	1	.....	.....	2	.....	.....	4	.....
18	.....	.....	1	.....	.....	1	1	.....	5	1	15	.....	.....	6	4	13	.....	8	1	.....	76	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
8	.....	.....	.....	.....	.....	.....	1	.....	1	.....	2	.....	.....	2	.....	.....	.....	1	.....	.....	14	.....
8	.....	.....	.....	.....	.....	.....	.....	1	.....	1	4	.....	.....	.....	1	.....	.....	.....	1	.....	8	.....
3	.....	.....	.....	.....	1	.....	.....	.....	3	.....	1	.....	.....	1	.....	.....	.....	1	.....	.....	7	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	1	.....	.....	.....	.....	.....	3	.....
7	.....	.....	1	.....	.....	.....	.....	.....	2	2	4	.....	.....	3	4	.....	2	5	.....	.....	25	.....
18	.....	2	.....	.....	.....	.....	.....	.....	6	1	22	.....	.....	5	3	2	1	11	3	1	66	.....
10	.....	.....	.....	.....	.....	1	.....	.....	2	.....	4	.....	.....	.....	.....	.....	.....	1	.....	.....	4	.....
8	.....	.....	.....	.....	.....	.....	1	2	.....	.....	7	.....	1	.....	.....	.....	.....	1	.....	.....	6	.....
1	.....	.....	1	.....	.....	.....	.....	.....	1	.....	6	.....	1	.....	1	.....	.....	4	.....	.....	11	.....
3	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	2	.....
3	.....	.....	.....	.....	1	.....	1	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1	.....
1	.....	.....	.....	.....	.....	.....	2	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	4	.....	.....	1	.....	.....	.....	2	.....	.....	2	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1	.....
.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1	.....	3	.....
7	.....	.....	.....	.....	.....	.....	1	.....	3	.....	4	.....	.....	1	1	3	1	6	.....	.....	19	.....
4	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1	.....
4	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	2	.....	.....	.....	1	2	1	.....	.....	.....	3	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1	1	.....	.....	.....	.....	1	.....
3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1	.....	.....	1	.....	.....	8	.....
9	.....	.....	.....	.....	.....	.....	.....	.....	4	1	14	.....	.....	2	2	1	4	4	1	1	36	.....
.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	2	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	1	.....	1	.....	2	1	1	1	1	.....	5	.....
3	.....	.....	.....	.....	.....	.....	1	.....	.....	1	1	.....	.....	1	.....	.....	.....	4	.....	.....	6	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
2	.....	.....	1	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1	.....	.....	.....	.....	.....	2	.....
1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	1	1	.....	.....	1	.....	.....	.....	4	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....
26	1	1	.....	.....	.....	1	.....	.....	10	.....	32	.....	1	6	6	2	1	8	3	.....	47	.....
8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	2	.....	.....	.....	.....	.....	11	.....

Laboratories

SUMMARY OF BUREAU ACTIVITIES NOVEMBER, 1927

DIAGNOSTIC EXAMINATIONS

	+	—	?	Unclassified	Total	
Typhoid	4	295	5	....	304	304
Paratyphoid A	....	304	....	....	....	304
Paratyphoid B	....	304	....	....	....	304
Diphtheria	179	3756	....	....	1973	3935
Diphtheria Virulence	29	74	....	....	52	103
Vincent's Angina	13	842	....	....	....	855
Hemolytic Streptococci	42	813	....	....	....	855
Tuberculosis	14	196	....	....	210	210
Syphilis	531	2551	156	....	2150	3238
Gonorrhoea	35	85	....	....	120	120
Rabies	5	7	....	....	9	12
Glanders	....	2	....	....	2	2
Special Specimens	1	1	....	63	2	65
					4822	10307

CHEMICAL AND BACTERIOLOGICAL

Milk samples	189	189
Water samples	265	265
Sewage samples	12	12
Sea Food samples	15	15
Clinical thermometers	747	747
Totals	6050	11535
Total laboratory procedures*		19225

*See page 261

The Work Still Grows

This was by far the largest month of November in the history of the Laboratories with an increase of 29 per cent over last year, and an increase of 315 per cent over November 1923 the last year of the Laboratories in New Haven. Diagnostic work other than diphtheria increased 162 per cent in examinations over 1926, which was the previous peak for November. Serology examinations increased 65 per cent over last year.

Preventable Diseases

INCIDENCE OF DISEASE FOR MONTH OF NOVEMBER, 1927

(As compared with previous years)

A comparison of the daily morbidity reports received during the month of November, 1927, with the corresponding month for the years 1922, 1923, 1924, 1925 and 1926.

	Average 1922-1926 for Nov.	Mean 1922-1926 for Nov.	1922	1923	1924	1925	1926	1927
Cerebrospinal Meningitis ..	4	3	7	9	3	1	2	....
Diphtheria	234	221	401	264	221	173	110	136
Encephalitis Epidemic	3	3	1	2	4	4	3	2
Measles	313	261	653	571	22	261	58	105
Poliomyelitis	4	3	5	9	3	3	1	16
Scarlet Fever	313	343	375	343	432	185	231	223
Smallpox	2	4	3	2	4	....	....	....
Typhoid Fever	16	17	18	22	13	17	10	18
Tuberculosis Pulmonary	118	115	149	119	115	103	106	100
Whooping Cough	229	235	246	186	302	235	175	332

A comparison of the morbidity of these diseases for the two preceding months, September and October with the November record is as follows:

	September	October	November
Cerebrospinal Meningitis	3	5	....
Diphtheria	78	142	136
Encephalitis Epidemic	3	2	2
Measles	27	47	105
Poliomyelitis	62	42	16
Scarlet Fever	64	113	223
Smallpox	....	....	....
Typhoid Fever	22	18	18
Tuberculosis Pulmonary	115	146	100
Whooping Cough	180	157	332

Cases of Other Reportable Diseases

Chickenpox	525	Tetanus	2
Encephalitis Epidemic	2	Trichinosis	3
Food Poisoning	1	Gonorrhoea	142
German Measles	5	Syphilis	152
Influenza	25	Chancroid	2
Mumps	193		
Paratyphoid Fever	6	Total	1068
Septic Sore Throat	10		

Cases of Occupational Diseases

Dermatitis	2		
Lead Poisoning	1	Total	3

Cases of Certain Reportable Diseases

November, 1927

State Total	Population Est. as of July 1, 1927	Typhoid Fever	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Meningitis Cerebrospinal	Poliomyelitis	Pulmonary Tuberculosis	Other Forms Tuberculosis	Pneumonia Lobar	Broncho-Pneumonia	Other Com. Diseases
	1,586,435	18	105	223	332	136		16	100	14	129	81	1068
NEW HAVEN CO.	475,419	4	95	21	117	21		2	32	5	27	16	296
New Haven	184,727	4	79	3	36	8			13	3	4	5	130
Waterbury	105,960		1	7	2	4		1	9		15	6	114
Meriden (city and town)	36,807		3	4	20				2	2	6	2	26
Ansonia	19,548					1			2				2
West Haven	18,834			1	3				2		2	2	
Naugatuck	16,829												
Wallingford (town and boro)	12,659		1		1				2				
Milford	14,673												6
Derby	12,963							1					6
Hamden	10,718			3	8	1							6
Branford (town and boro)	7,073			2		1							
Seymour	8,321					5							1
Towns under 5,000	26,307		12		48				2			1	5
FAIRFIELD CO.	379,505	5	5	57	95	33		1	17	1	27	13	165
Bridgeport	174,890	2	1	17	4	23			9	1	13	4	23
Stamford (city and town)	48,515		2	4	43	1					2	1	11
Norwalk	30,173			2									1
Danbury (city and town)	21,931		1	9		1					5		14
Greenwich (town and boro)	26,373		1	17		2		1	1		2	2	6
Stratford	17,451			1		2			1			1	34
Fairfield	15,541				1				4		3	2	38
Shelton	11,699	3		1		2						1	2
Westport	5,772												
Towns under 5,000	27,160			6	47	2			2		2	2	36
HARTFORD CO.	402,344	6	2	55	40	70		6	33	8	43	34	369
Hartford	168,258	1		31	26	30		1	18	1	16	14	151
New Britain	71,068			10	4	5		1	6	6	8	9	37
Bristol (city and town)	26,087			3		7			1		4	4	18
Manchester	21,992		1	1		10			2		6	1	9
Enfield	13,241			1		2			1		1		2
East Hartford	14,311	3			3	1		1			1	1	2
Southington (town and boro)	9,925		1	2	4						2	1	25
West Hartford	11,908			3		2		1		1	3	2	73
Windsor	6,732					1							1
Glastonbury	6,206								1			1	1
Wethersfield	5,264	2			2	1							10
Plainville	5,064												1
Towns under 5,000	42,288			4	1	11		2	4		2	1	39
NEW LONDON CO.	114,930			46	46	4			7		13	3	40
Norwich (city and town)	30,689			21		3			4		2	1	18
New London	30,149			12	37	1			1		3	1	10
Stonington (town and boro)	11,041										1		
Groton (town and boro)	11,326			5	6								4
Towns under 5,000	31,725			8	3				2		7	1	8
LITCHFIELD CO.	80,900			4	1	6			4			1	15
Torrington (town and boro)	25,316								1				
Winchester (inc. Winsted)	9,109			2									2
Plymouth	6,459					2							
Watertown	7,506												1
Towns under 5,000	32,510			2	1	4			3			1	12
WINDHAM CO	56,258	1	2	39	14	1		4			6	2	30
Windham (inc. Willimantic)	14,418			4				1			4		4
Putnam (city and town)	9,220	1			5						1		
Plainfield	8,818			30				1				1	
Killingly (inc. Danielson)	9,384		2			1		2			1		10
Thompson	5,226			2	9								4
Towns under 5,000	9,192			3								1	12
MIDDLESEX CO	49,279	2	1			1		2	7		11	7	147
Middletown (city and town)	22,032		1								7	5	132
Middletown State Hospital									1				3
Towns under 5,000	26,347	2				1		2	6		4	2	12
TOLLAND CO.	27,800				19			1			2	5	6
Vernon (inc. Rockville)	8,751							1					4
Stafford (town and boro)	5,472										2	2	1
Towns under 5,000	13,577				19							3	1

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CONNECTICUT HEALTH BULLETIN

FOR A CLEAN STATE AND A HEALTHY PEOPLE

Vol. 42 **January, 1928** **No. 1**

SPECIAL ARTICLES

Present Diphtheria Situation and How to Protect Your Children

State, County, Town Populations as of July 1, 1928

Further Observations On Bact. Abortus Infection in Man

News Notes From the Field

Issued Monthly by the

State Department of Health
HARTFORD

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MONTHLY HEALTH BULLETIN

Vol. 42 January, 1928 No. 1

THE PRESENT DIPHTHERIA SITUATION AND HOW TO PROTECT YOUR CHILDREN*

By Millard Knowlton, M. D., C. P. H.

Diphtheria is more prevalent this year* than last, but your children need not have it. You can protect them. The Connecticut State Department of Health wishes you to know how to protect your children from diphtheria, and that is why I have been requested to give this talk. If you will make yourself comfortable in an easy chair I will promise not to talk more than ten minutes. Yes, you may smoke if you like. This applies to ladies as well as to members of the rougher, cruder sex. Of course you will destroy lighted cigarette butts as a safeguard against fire.

In the year 1920 there were reported in Connecticut 3,754 cases of diphtheria with 235 deaths. Since then the prevalence of the disease has steadily decreased until only 1239 cases and 83 deaths were reported in the state for 1926. Thus diphtheria was only one-third as prevalent in 1926 as in 1920. But this year the prevalence has increased. More cases of diphtheria have been reported each month since last April than for the corresponding month last year. For the first time in seven years the number of cases of diphtheria reported in Connecticut this year will exceed the number reported the preceding year.

Diphtheria Occurs in Waves

Connecticut is not alone in having more diphtheria cases this year than last year. In fact, an increase in number of cases was observed elsewhere before it became apparent in Connecticut. If you ask me why this increase in prevalence, my answer would be that communicable diseases are subject to great variations in prevalence. In fact they are quite likely to occur in waves. I am glad to tell you that the crest of the present wave of increased diphtheria prevalence is running less than a third as high as the last great wave of diphtheria prevalence which began in August, 1919, and lasted for twenty months, almost without interruption, or until March, 1921. For example, 142 cases of diphtheria were reported for October, 1927, as against 548 for October, 1919. Likewise 136 cases were reported for November, 1927, as against 576 for November 1919.

Should you pursue your inquiry further and ask why diphtheria occurs in waves, my reply might suggest that perhaps

*Radio talk given over WTIC. December 7. 1927

this is Nature's way of maintaining a balance between two opposing forces. In general, the prevalence of diphtheria depends upon the distribution of diphtheria germs in relation to susceptible persons. By susceptible persons I mean persons who are not immune to diphtheria, and who are therefore liable to have the disease when exposed to it. Each year's crop of babies adds to the number of susceptible persons. When this number increases to such an extent that more than the usual number of susceptible persons come into contact with diphtheria germs, there is a wave of increased prevalence until the balance is restored. Measures to lessen the number of susceptible persons through immunization procedures will tend to lessen the height of the wave of increased prevalence and also to shorten its duration.

Young Children Most Susceptible

In their infancy your children are susceptible to diphtheria. As they grow older they will become protected against this disease. There are two methods of acquiring this immunity or protection. One is safe and the other hazardous. If you fail to choose the safe method, they will become protected by the hazardous method, for the natural method of protection against diphtheria involves certain unavoidable hazards.

The germs of diphtheria are dangerous because they have acquired a bad habit. They have acquired the habit of making a very strong poison or toxin wherever they grow. Practically all children become "carriers" of diphtheria germs some time during their lives. When the germs grow in the nose or throat of a child, the toxin they make is absorbed and poisons the child's body. The body naturally defends itself by manufacturing a substance that will overcome or neutralize this dangerous poison. The substance the body makes for its own protection is called antitoxin, which simply means against-toxin. If the germs grow slowly so as to give the body time to manufacture enough antitoxin to protect itself, the person will become immunized against diphtheria and is thus protected from the disease. But the growth of germs in the nose or throat of a carrier is not subject to regulation. At any time they may begin to grow so fast as to cause the disease. In this way a diphtheria carrier may become a case of the disease from an overdose of the toxin. Please remember that when the germs grow in the nose and throat of a carrier the amount of toxin they make cannot be measured or controlled. Besides, if the germs grow in the larynx, the membrane that is formed may choke the patient to death before relief can be obtained.

Protecting Against Diphtheria

By the safe method of protecting against diphtheria the germs are grown in a flask or bottle in a laboratory where the toxin

they make cannot do harm. Then the toxin is measured out in very accurate doses, too small to do harm but large enough to cause the body to manufacture antitoxin and become protected against diphtheria. When toxin is given for this purpose it is mixed with antitoxin and the preparation is called toxin-antitoxin. Three doses of toxin-antitoxin a week apart will cause a child to make its own antitoxin and become protected against diphtheria.

Each child should have the protective treatment as soon as possible after the age of six months. Diphtheria is especially dangerous to young children. The percentage of cases that die during the very early years of life is much higher than the percentage of cases that are fatal in later years. For this reason, it is highly important to immunize children when very young so as to protect them during the most dangerous years.

If, however, this measure of protection has been neglected, it can be given to children of any age. The time to do it is **now.** Parents are advised to take their children to their family physician and request him to protect them against diphtheria. Should it be desired, the older children may be given the Schick test to find out whether or not they are susceptible to the disease. Some of the older children will be found to be already protected and not need the protective treatment. For very young children, the test is not necessary as nearly all young children are susceptible. In any case, it is well to apply this test for susceptibility about six months after treatment with toxin-antitoxin. Occasionally, a second treatment may be required for complete protection.

Delay is Dangerous

May I add a word of warning in regard to sore throat. A recent study indicates that many deaths from diphtheria occur because of delay in calling a physician. Antitoxin will cure diphtheria if given in time. When a child complains of sore throat, call the doctor at once. Tomorrow may be too late. Hoarseness in coughing or talking may mean laryngeal diphtheria which is one of the most dangerous forms of the disease. Delay in calling a physician for such cases may mean disaster.

To sum up then, the Connecticut State Department of Health advises all parents to have their children protected against diphtheria by the use of toxin-antitoxin. Parents are also advised to call a physician promptly when a child is ill with symptoms that may suggest diphtheria. Delay in such a case is dangerous. But the time to have your children protected by the use of toxin-antitoxin is when they are well. Do it now. Call your physician tonight and make an appointment for tomorrow.

POPULATIONS AS OF JULY 1, 1928
STATE, COUNTIES AND TOWNS

The population of the state, estimated as of July 1, 1928 is 1,613,874. The date of July 1 is selected for the reason that it is the mid-year population and is a fairer population to use than a population estimated at any other date.

All death, marriage and birth rates will be calculated, using the populations as contained here, not only for publication throughout the ensuing year but also in the Registration Report for 1928 when it will appear.

The method of calculation is quite simple. The net change between the census of 1920 and 1910 is found. This may be an increase or a decrease. As the interval between censuses was, roughly, 10 years, the annual change is found by dividing the actual or total difference between censuses by 10. Strictly speaking, the difference is divided by 233/24 years. Having now found the annual change, it is a simple matter to add this amount from year to year, thus continuing the population estimate beyond 1920 by a process called extrapolation.

AS OF JULY 1, 1928

STATE POPULATION 1,613,874

Counties

Fairfield	387,138	New London	116,306
New Haven	483,603	Windham	56,717
Hartford	411,342	Middlesex	49,372
Litchfield	81,518	Tolland	27,878

Towns Over 5,000

Ansonia	19.805	Norwich	30,762
Branford	7,133	Plainfield	8,909
Bridgeport	179,163	Plainville	5,191
Bristol	26,820	Plymouth	6,554
Danbury	21,931	Putnam	9,334
Derby	13,194	Seymour	8.526
East Hartford	14,311	Shelton	12,000
East Haven	5.030	Southington	10,123
Enfield	13,445	Stafford	5,490
Fairfield	16,091	Stamford	49,923
Glastonbury	6,288	Stonington	11,152
Greenwich	26,956	Stratford	17,451
Groton	11,607	Thompson	5,252
Hamden	11,002	Torrington	25,453
Hartford	172,288	Vernon	8,751
Killingly	9,517	Wallingford	12,747
Manchester	22,478	Waterbury	107,908
Meriden	37,085	Watertown	7,732
Middletown	23,000	West Hartford	12,763
Milford	15,273	West Haven	19,334
Naugatuck	17,069	Westport	5,862
New Britain	72,654	Wethersfield	5,387
New Haven	187,705	Winchester	9,144
New London	30,770	Windham	14,509
Norwalk	30,537	Windsor	6,880

Total, Towns Over 5,000 1,408,289

POPULATIONS AS OF JULY 1, 1928

Towns Under 5,000

Andover	404	Mansfield	3,095
Ashford	678	Marlborough	303
Avon	1,705	Middlebury	1,268
Barkhamsted	689	Middlefield	1,055
Beacon Falls	1,970	Monroe	1,300
Berlin	4,796	Montville	3,940
Bethany	395	Morris	463
Bethel	3,021	New Canaan	4,092
Bethlehem	534	New Fairfield	451
Bloomfield	2,894	New Hartford	1,635
Bolton	461	Newington	2,984
Bozrah	858	New Milford	4,643
Bridgewater	457	Newtown	2,647
Brookfield	856	Norfolk	1,105
Brooklyn	1,575	North Branford	1,350
Burlington	1,037	North Canaan	1,885
Canaan	533	North Haven	1,860
Canterbury	921	North Stonington	1,180
Canton	2,483	Old Lyme	879
Chaplin	375	Old Saybrook	1,453
Cheshire	3,613	Orange	1,935
Chester	1,897	Oxford	994
Clinton	1,225	Pomfret	1,324
Colchester	2,032	Portland	3,798
Colebrook	478	Preston	3,465
Columbia	757	Prospect	212
Cornwall	798	Redding	1,195
Coventry	1,576	Ridgefield	2,543
Cromwell	2,759	Rocky Hill	2,022
Darien	4,391	Roxbury	609
Durham	951	Salem	420
Eastford	492	Salisbury	2,052
East Granby	1,283	Saybrook	2,666
East Haddam	2,285	Scotland	373
East Hampton	2,415	Sharon	1,465
East Lyme	2,617	Sherman	526
Easton	1,010	Simsbury	3,334
East Windsor	4,072	Somers	1,689
Ellington	2,200	Southbury	1,055
Essex	2,865	South Windsor	2,112
Farmington	4,165	Sprague	2,488
Franklin	573	Sterling	1,262
Goshen	675	Suffield	4,270
Granby	1,334	Thomaston	4,284
Griswold	4,218	Tolland	1,004
Guilford	2,723	Trumbull	3,333
Haddam	1,669	Union	243
Hampton	453	Voluntown	612
Hartland	428	Warren	349
Harwinton	2,437	Washington	1,553
Hebron	933	Waterford	4,652
Kent	1,078	Westbrook	829
Killingworth	505	Weston	677
Lebanon	1,286	Willington	1,275
Ledyard	1,231	Wilton	1,182
Lisbon	904	Windsor Locks	3,492
Litchfield	3,265	Wolcott	854
Lyme	660	Woodbridge	1,425
Madison	2,138	Woodbury	1,648
		Woodstock	1,743

Total, Towns Under 5,000 205,585

FURTHER OBSERVATIONS ON BACT. ABORTUS INFECTION IN MAN

At the American Public Health Association meeting in Cincinnati, great interest was displayed in the question of **Bact. abortus** infection in man. Two papers aside from the one abstracted in the last health bulletin were presented. These brought out several important points.

Dr. Orr of Michigan reported sixteen cases which had occurred in that state. He emphasized the importance of the consumption of raw milk in the spread of the disease and showed that in his experience no secondary cases, i.e., no cases contracted from another case occurred. He believes that the normal resistance of man is very high to this disease but many cases are missed because the physicians as a rule do not recognize it as a clinical entity. Pasteurization of the milk is the best solution of the problem.

Dr. Carpenter of New York reported an increase in the number of proven cases of this disease in his state. Man may become infected either through wounds or through food. The number of organisms eliminated in the milk of infected cows is variable and probably the animals which spread the organism in this way are comparatively few.

The paper which was abstracted in the last bulletin was criticized because too low dilutions were used. It is claimed that many blood sera give "free zone" reactions, i.e., no reaction in the lower dilutions, but as the amount of serum progressively decreases the intensity of the reaction increases. For this reason it has been decided to test during the coming year a large number of Wassermann samples using dilutions of 1:25, 1:50, 1:100, 1:200, and 1:400.

Through metabolic studies made by Dr. McAlpine and his coworkers since the work reported in the December 1927 Health Bulletin was carried out it has been proven that the porcine type of **Bact. abortus** is different from the true bovine variety of **Bact. abortus.** **Bact. abortus** which has been isolated from man has in all cases studied in his Laboratory fallen into the porcine group. The incidence of **Bact. abortus** infection in man appears to be higher in states where the swine industry is large, and presumptive evidence points to the porcine type as the causative organism. It is considered possible that cows may become infected with the porcine variety should they come in close contact with swine.

NEWS NOTES FROM THE FIELD

Physicians Licensed

Bridgeport, Adzima,, Joseph M., 125 Helen Street
Danbury, Knapp, Dwight R., 7 Harding Place
Greenwich, Burrow, Trigant, 411 Field Point Road
Greenwich, Thompson, Charles Baker, 411 Field Point Road
Greenwich, Syz, Hans C., 411 Field Point Road
Hartford, James, Lewis P., 370 Maple Avenue
Hartford, Hirshberg, Manuel S., 51 Hebron Street
Hartford, Beatman, Israel, Jr., 103 Irving Street
Hartford, Whiting, Richard C., 56 Garden Street
Hartford, Dawson, Lionel M., 39 Ansonia Street
Madison, Allison, Stanton T.
New Britain, Benoit, Raoul J., 242 Whiting Street
New Britain, Loud, Norman W., New Britain General Hospital
New Haven, Kerns, Harry N.
New Haven, Russell, Ernest F., 227 McKinley Avenue
New Haven, Shure, Abraham L., 19 Dwight Street
New Haven, Appell, Harold S., 216 Spring Street
New Haven, Vegliante, Michael E., 174 Bradley Street
New Haven, Thalheimer, Edward J., 377 Orange Street
New Haven, Sette, Alfred J., 162 Day Street
New Haven, Levy, Nathan, 53 Pearl Street
Waterbury, Iannantuoni, Adolph J., 81 Russell Street
Waterbury, Meredith, William C., 134 Highland Avenue
West Hartford, Cushman, Laurence A.
West Haven, Milano, Nicola A., 740 Campbell Avenue

Midwife Licensed

New Haven, Lavorante, Julia, 168 Blatchley Avenue

Health Officers Appointed

New London County Health Officer, Hibbard R. Norman, Esq. has appointed Katherine M. Bryan, M. D. health officer of Preston to fill the vacancy caused by the death of Mr. E. P. Barnes; and Emily B. Chatfield, M. D., health officer of Voluntown to fill the vacancy caused by the resignation of Dr. H. T. Thurber.

Litchfield County Health Officer, William C. Bierce, Esq. has appointed Clark K. Peterson M. D. of Lakeville, health officer of Salisbury to succeed Dr. W. B. Bissell; and Edwin G. Reade, M. D. as health officer of Waterbury to succeed Dr. Charles Jackson.

Sanitary Engineering

On December 28th the new Easton supply of the Bridgeport Hydraulic Company was turned into the public mains. The supply main was throughly flushed with chlorinated water and blown off to waste before the water was placed in use. Some slight disturbances in the distribution mains soon disappeared and normal service was restored. The water is somewhat colored as is usually the case with new surface water supplies, and this color will decrease as the reservoir is continued in use. The latest type automatic vacuum chlorinators have been installed to disinfect the water.

This reservoir provides storage to the amount of six billion gallons which should do much to forestall any possible water shortage in Bridgeport for many years. This reservoir is now one of the largest water supply reservoirs in Connecticut.

Public Health Nursing

Towns which did not, at their annual meeting, appropriate a sum for public health nursing may still take advantage of the offer of state aid by raising, through popular subscription, Red Cross funds, receipts from tuberculosis seal sale, and through fees accruing from industrial companies for services rendered, sufficient amount to meet their share of the budget necessary for support of such work. By writing to State Department of Health, health officers may be advised as to procedures in raising funds through the methods mentioned.

Laboratories

Miss Edith Beckler, Director of the Bacteriological Laboratory of the Massachusetts State Department of Health and Professor of Bacteriology at Simmons College recently visited the Bureau of Laoratories to study the work of blood examination for undulant fever, as similar work is being contemplated in the Massachusetts Department of Public Health.

A laboratory representative attended the conference of manufacturers of clinical thermometers and master blank makers in New York called by the U. S. Department of Commerce to consider establishing a commercial standard for clinical thermometers to be used as a basis for the "certification plan" recently put into operation by that department.

A meeting of all laboratory workers in the approved milk laboratories of Connecticut was held at the State Capitol in January under the auspices of the State Department of Health. This meeting was called to discuss and act upon a report which dealt with the adoption of a method for making the test for visible dirt in milk which would be uniform for all Connecticut laboratories.

Laboratories

SUMMARY OF BUREAU ACTIVITIES
DECEMBER, 1927

	DIAGNOSTIC					
	+	—	?	Unclassified	Specimens	Examinations
Typhoid	7	177	1	....	185	185
Paratyphoid A	....	185	....	....	....	185
Paratyphoid B	....	185	....	....	....	185
Diphtheria	172	2324	....	....	1260	2496
Diphtheria Virulence	17	93	....	....	89	110
Vincent's Angina	10	846	....	....	2	856
Hemolytic Streptococci	45	809	....	....	....	854
Tuberculosis	15	191	....	....	205	206
Syphilis	537	2434	148	....	2233	3119
Gonorrhoea	25	62	....	....	87	87
Pneumonia	5	....	....	....	4	5
Malaria	....	1	....	....	1	1
Rabies	5	4	....	....	8	9
Glanders	....	1	....	....	1	1
Special Specimens	2	7	1	75	10	85
					4085	8384
CHEMICAL AND BACTERIOLOGICAL						
Milk samples					265	265
Water samples					193	193
Sewage samples					4	4
Sea Food samples					5	5
Clinical thermometers					452	452
Totals					5004	9303
Total laboratory procedures						18318

A Half-Year of Laboratory Work

The month of December showed the next to the largest number of examinations ever made in December of any year. December 1924, during a period when large numbers of diphtheria cultures were being examined, exceeded this month just past by 1,541 examinations. Striking increases are noticeable in the examinations of blood for syphilis and for diagnostic examinations made in connection with the examination of certified milk handlers. There was a decrease in the number of milk and water samples received as compared with last year. The previous month also showed a striking decrease in milk and water examinations. Apparently those activities are not being followed up as closely by health officers as has usually been the case during the winter months.

The month of December brings to a close the first half of our present fiscal year. During the six months just past 48,014 laboratory examinations were made, as compared with 38,985 for the first half of the last fiscal year or as compared with 33,746 examinations the first six months of 1925-1926. These are increases of 23.2 per cent and 42.3 per cent respectively.

Vital Statistics

MONTH OF NOVEMBER

TOTALS FOR FIRST ELEVEN MONTHS,1927, 1926, 1925

Year	Births	Birth Rate*	Marriages	Mar. Rate*	Deaths	DeathRate*
1927	25,304	17.4±.1	10,977	7.5±.1	15,018	10.3±.1
1926	26,943	18.8±.1	11,728	8.1±.1	16,710	11.7±.1
1925	27,474	19.6±.1	11,691	8.3±.1	16,127	11.5±.1

*Per 1,000 population, annual basis.

There are several outstanding features of the figures above, which are the accumulated totals for the respective years. In the first place it is at once apparent that there has been a very marked reduction in the births and corresponding birth rate. This has been in evidence throughout the year and as a matter of fact for some years past it has been apparent that the births were falling off. This is not alone characteristic of Connecticut, but appears to be nation wide. And the figures which are so far available indicate that England is experiencing a similar reduction. As contributing in part at least to this reduction a decrease in the marriages will be noted.

By far the most interesting columns above are those for the number of deaths and the death rates. In actual numbers 1927 is 1,692 below the deaths for 1926. In rate 1927 produces 10.3 per 1,000 of the population and 1926 witnessed 11.7. This is truly a phenomenal reduction. It cannot by the most extreme extension of chance variation be accounted for as merely accidental. Never in the history of the vital statistics of the state has such a low death rate been recorded. And unless the most unusual and unexpected mortality occurs it seems certain that the year 1927 will yield the most favorable rate on record. The previous record low rate is 11.3 of 1924.

Births

The accumulated totals of births above give a birth rate of 17.4 per 1,000 of the population. This is indeed very low —but what must be said of the monthly number of births, 2077, which give an annual rate of 15.7. In the last six years there is no rate as low as this. In 1926 the rate was 16.9, indeed a low rate, but so far above the 15.7 of 1927 that no simple accounting will explain the difference.

There are 49 cities and towns in the state having populations of 5,000 and over. Of these 26 reported more births in 1927 than in 1926. Last month 19 of these towns reported increases. However, the increases are in general small, the following towns only, having increases of 10 or more.

Bristol	10±11	Hamden	10±5
East Hartford	20±6	West Haven	12±7

Of these increases East Hartford and Hamden alone are of noteworthy consideration. The other increases may be regarded as mere accidents of chance.

There were 88 stillbirths recorded, making a total number of births of 2165 from which it is easily shown that the stillbirths appeared at a rate of 40.4 per 1,000 total births. This is somewhat higher than the rate of 33.7 last month. But the rate of about 40 in a thousand seems to be normal and there are in general but small variations above or below this.

Of the 88 stillbirths 52 were males and 36 females, giving a sex ratio of 144 males to 100 females. As usual a rather high preponderance toward the male. In the total living births this sex ratio runs 104-107 to 100, showing very significantly that the stillbirths run to the male.

Deaths

Records of 1227 deaths were received in the department. This is 106 below the 1333 recorded in 1926. The monthly death rate is 9.3—extraordinarily low for November, and lower by an entire point than any other year in the past six years. This is indeed a record of which the state may well be proud. If a low death rate is significant of a healthy people in a healthy environment—and if such a rate is **not** significant of that it is indicative of nothing—then surely **never** have the people of Connecticut been so healthy or in such a favorable environment. We apparently have nearly completed a year which will set a new record. Yet with more education of the people in public health measures the record years will become the expected years. Such problems as the prevention of cancer and pneumonia will respond as yet only to the cooperation of the public. There is no antitoxin to cure cancer—yet in its incipiency it is in most cases curable. Pneumonia is unnecessary, yet what toll it takes each year in America. It is better by far to you and those around you to stay home a day or two with a cold. The neglected cold is apt to keep you permanently home.

The table below will show just how the month of November compares in 1927 and 1926 with respect to a selected list of causes of death.

Cause of Death	1927	1926	Increase	Decrease
Diseases of the Heart	194±14	225±15	....	31±20
Epidemic Encephalitis	3±2	1±1	2±2	....
Pneumonia undefined	2±1	0	2±1	....
Typhoid Fever	0	2±1	....	2±1
Measles	0	0	....	....
Scarlet Fever	0	3±2	....	3±2
Whooping Cough	2±1	2±1	....	....
Diphtheria	7±3	5±2	2±3	....
Influenza	14±4	15±4	....	1±5
Tuberculosis, Pulmonary	68±8	77±9	....	9±12
Tuberculosis, other forms	8±3	10±3	....	2±4
Cancer	131±11	141±12	....	10±17
Cerebrospinal Meningitis	0	1±1	....	1±1
Poliomyelitis	1±1	0	1±1	....
Lobar Pneumonia	45±7	59±8	....	14±10
Broncho Pneumonia	47±7	41±6	6±9	....
Diarrhoea and Enteritis under 2	23±5	10±3	13±6	....
Puerperal diseases	11±3	17±4	....	6±5
Accident	93±10	84±9	9±13	....
Suicide	7±3	10±3	....	3±4
Homicide	1±1	0	1±1	....
Other causes	570±24	630±25	....	60±35
Totals	1227±35	1333±36	36	142

Of the increases, but one is significant. And strange to say that increase occured in diarrhoea and enteritis under 2. This cause of death has been running very favorable through the summer months giving a pronounced reduction in that period. Just why there should have been an increase in a month when in general this mortality is coming down with the onset of cooler weather is not readily explained. Yet the increase is of such an amount as to warrant the belief that it was just a flurry. Something caused it.

Of the decreases, despite the fact that there was a total reduction of 106 deaths, there is none of significance. This is rather unusual. It will be noted that the list above is limited. Under other causes a decrease of 60 will be observed. Evidently this classification of other causes may be concealing some item or items where a decided reduction may have been effected—and then perhaps the 60 were distributed more or less uniformly, in which case there would be no single item more pronounced than any other.

The accumulated totals of the items above for the years 1927 and 1926 will now be given, to include eleven months.

Cause of Death	1927	1926	Increase	Decrease
Diseases of the Heart	2551	2616	....	65
Epidemic Encephalitis	18	24	....	6
Pneumonia undefined	22	24	....	2
Typhoid Fever	16	28	....	12
Measles	21	192	....	171
Scarlet Fever	18	32	....	14
Whooping Cough	37	92	....	55
Diphtheria	80	70	10	....

Influenza	270	525	....	255
Tuberculosis, pulmonary	855	963	....	108
Tuberculosis, other forms	125	145	....	20
Cancer	1535	1503	32	....
Cerebrospinal meningitis	9	10	....	1
Poliomyelitis	16	5	11	....
Lobar pneumonia	628	840	....	212
Broncho pneumonia	549	664	....	115
Diarrhoea and Enteritis under 2	166	239	....	73
Puerperal diseases	153	168	....	15
Accident	954	1001	....	47
Suicide	176	201	....	25
Homicide	32	42	....	10

A list of decreases to gratify the eye of the worker in public health! And two great problems in the list of increases—cancer and diphtheria. Diphtheria is absolutely preventable—yet there is an increase. Well, it will go on taking its grim harvest just so long as people will refuse to immunize their children with toxin-antitoxin. Theirs is the responsibility. The column of diphtheria may be regarded as the record of broken faith. Very few of us are without fire insurance. Toxin-antitoxin is more certain by far than any form of insurance. Life insurance accepts the fact of ultimate and total loss. Fire insurance underwrites a possible loss. Toxin-antitoxin makes a loss from diphtheria absolutely impossible.

Cancer has been going up for some time and will continue to gain as long as people, **on the average,** wait for **several months** after they suspect cancer before going to a physician.

The column of decreases will speak eloquently for itself. The reason why 1927 will be a record year.

FOR SIX YEARS—NOVEMBER, 1927

CONNECTICUT	1922	1923	1924	1925	1926	1927
BIRTHS *Birth Rate*	2366 19.6	2354 19.1	2497 19.9	2337 18.3	2194 16.9	2077 15.7
MARRIAGES *Marriage Rate*	1311 10.9	1365 11.1	1219 9.7	1179 9.2	1239 9.5	1043 7.9
DEATHS *Death Rate*	1346 11.2	1307 10.6	1368 10.9	1453 11.4	1333 10.3	1227 9.3
COMMUNICABLE DIS.* DEATHS *Per Cent to Total Deaths*	154 11.4	166 12.7	117 8.5	131 9.0	106 8.0	92 7.5
DEATHS UNDER 1 YEAR *Rate Per 1,000 Births*	131 50.3	156 61.0	178 67.3	165 66.4	125 51.9	131 53.8

*Includes Typhoid Fever, Measles, Scarlet Fever, Whooping Cough, Diphtheria, Tuberculosis Pulmonary, Cerebrospinal Meningitis, Poliomyelitis, Influenza.

Statistics
November, 1927

	Population Est. as of July 1, 1927 Based on U. S. Census	TOTALS				DEATH RATES			AGE GROUPS		
		Births	Stillbirths	Marriages	Deaths	All Causes (per 1,000 population)	Tuberculosis (per 1,000 population)	Children under 1 year (per 1,000 births)	Under 1 year	1 to 5 years	65 years and over
State of Connecticut	1,586,435	2077	88	1043	1227	9.3	0.5	53.8	131	26	458
Ansonia	19,548	24	1	17	12	7.4	0.6	52.2	1	.....	4
Branford	7,073	9	1	2	7	11.9	.....	122.4	1	.....	4
Bridgeport	174,890	231	13	92	105	7.2	0.3	54.9	14	1	35
Bristol	26,087	63	3	21	18	8.3	.....	35.5	2	.....	6
Danbury	21,931	42	5	17	27	14.8	1.1	91.6	4	1	10
Derby	12,963	11	4	12	6	5.6	0.9	28.9	1	.....	2
East Hartford	14,311	27	1	8	7	5.9	0.8	80.0	1	.....	2
Enfield	13,241	16	.....	13	10	9.1	0.9	48.8	1	.....	2
Fairfield	15,541	22	.....	3	15	11.6	.....	268.7	3	.....	2
Glastonbury	6,206	8	.....	2	9	17.4	.....	.....	.....	.....	4
Greenwich	26,373	34	2	46	16	7.2	0.5	71.3	3	.....	4
Groton	11,326	15	.....	8	10	10.6	.....	218.2	2	.....	4
Hamden	10,718	19	.....	6	13	14.6	.....	210.5	3	.....	2
Hartford	168,258	258	11	116	135	9.6	0.9	46.4	16	1	47
Killingly	9,384	15	.....	12	7	9.0	.....	.....	.....	2	3
Manchester	21,992	25	1	10	15	8.2	.....	30.6	1	1	4
Meriden	36,807	58	1	39	33	10.8	0.7	68.5	4	1	12
Middletown	22,932	32	1	15	19	9.9	.....	41.5	2	.....	11
Milford	14,673	2	.....	.....	3	2.5	.....	.....	.....	.....	.....
Naugatuck	16,829	12	.....	28	16	11.4	0.7	.....	.....	.....	7
New Britain	71,068	87	4	38	41	6.9	0.3	53.6	7	4	13
New Haven	184,727	203	9	121	145	9.4	0.2	45.3	14	3	54
New London	30,149	28	5	28	30	11.9	1.2	30.2	2	.....	11
Norwalk	30,173	44	3	27	31	12.3	0.4	17.3	1	.....	16
Norwich	30,689	49	2	36	19	7.4	0.4	32.1	2	1	6
Plainfield	8,818	6	.....	2	10	13.6	1.4	186.0	2	.....	3
Plainville	5,064	7	.....	.....	1	2.4	.....	196.7	1	.....	.....
Plymouth	6,459	7	2	6	3	5.6	.....	148.1	1	.....	.....
Putnam	9,220	7	2	5	4	5.2	.....	.....	.....	.....	2
Seymour	8,321	4	.....	3	6	8.7	.....	136.4	1	.....	2
Shelton	11,699	9	1	5	13	13.3	1.0	82.8	1	.....	6
Southington	9,925	14	.....	2	6	6.1	.....	69.8	1	.....	2
Stafford	5,472	7	.....	11	4	8.8	.....	.....	.....	.....	3
Stamford	48,515	90	4	40	36	8.9	1.0	10.7	1	1	11
Stonington	11,041	7	.....	8	8	8.7	1.1	.....	.....	.....	7
Stratford	17,451	22	1	5	10	6.9	2.8	70.2	1	.....	3
Thompson	5,226	8	.....	4	3	6.9	.....	162.2	1	.....	2
Torrington	25,316	28	1	23	21	10.0	0.9	98.8	4	.....	5
Vernon	8,751	19	.....	2	11	15.1	1.4	75.9	1	.....	4
Wallingford	12,659	13	.....	7	6	5.7	.....	.....	.....	.....	4
Waterbury	105,960	144	2	68	73	8.3	0.6	48.3	9	2	17
Watertown	7,506	11	.....	.....	1	1.6	.....	.....	.....	.....	1
West Hartford	11,908	26	1	2	12	12.1	.....	142.0	2	3	3
West Haven	18,834	33	1	13	14	8.9	1.9	32.6	1	.....	4
Westport	5,772	4	.....	2	3	6.2	.....	.....	.....	.....	2
Wethersfield	5,264	5	.....	3	6	13.7	.....	.....	.....	.....	2
Winchester	9,109	6	.....	9	7	9.2	.....	.....	.....	.....	2
Windham	14,418	.....	.....	.....	4	3.3	.....	40.4	1	.....	1
Windsor	6,732	10	.....	2	7	12.5	1.8	.....	.....	.....	1
Towns under 5,000	209,106	236	6	104	192	116	0.3	93.7	18	5	100
Other States		20	.....	.....	17	.....	.....	.....	.....	.....	6

DEATHS FROM IMPORTANT CAUSES

Diseases of the Heart	Encephalitis Epidemic	Pneumonia Undefined	Typhoid Fever	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Influenza	Tuberculosis-Pulmonary	Tuberculosis Other forms	Cancer	Meningitis-Cerebrospinal	Poliomyelitis	Pneumonia—Lobar	Pneumonia—Broncho	Diarrhoea-Enteritis Under 2	Puerperal Diseases	Accident	Suicide	Homicide	Institutional Deaths	Non-resident Deaths
194	3	2	.....	.....	.....	2	7	14	68	8	131	.....	1	45	47	23	11	93	7	1	459	.....
1	.....	.....	.....	.....	.....	.....	.....	1	1	.....	2	.....	.....	1	2	.....	.....	.....	.....	.....	6	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1	.....
11	.....	.....	.....	.....	.....	.....	3	1	5	.....	8	.....	.....	5	4	2	.....	8	1	1	49	.....
4	.....	1	.....	.....	.....	.....	.....	1	.....	.....	1	.....	.....	1	1	.....	1	1	.....	.....	6	.....
1	1	.....	.....	.....	.....	.....	.....	.....	2	.....	7	.....	.....	1	.....	1	.....	1	.....	.....	3	.....
.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	6	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	2	.....	.....	.....	.....	.....	.....	2	.....	.....	1	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....	2	.....	1	.....	2	.....	.....	3	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....
2	.....	.....	.....	.....	.....	.....	.....	1	1	.....	2	.....	.....	1	.....	.....	.....	1	.....	.....	6	.....
4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....
1	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	.....
29	.....	.....	.....	.....	.....	1	.....	1	13	1	11	.....	.....	2	3	4	.....	8	2	.....	63	.....
1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....
1	1	.....	.....	.....	.....	.....	.....	.....	.....	1	2	.....	.....	.....	.....	.....	1	2	.....	.....	4	.....
5	.....	.....	.....	.....	.....	.....	.....	.....	2	1	4	.....	.....	1	2	1	1	1	.....	.....	7	.....
6	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	7	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	3	.....
3	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	2	.....	.....	1	1	.....	.....	.....	.....	.....	3	.....
5	.....	.....	.....	.....	.....	.....	.....	1	2	2	4	.....	.....	3	2	1	1	2	1	.....	13	.....
15	.....	.....	.....	.....	.....	.....	1	.....	3	1	28	.....	.....	9	10	.....	4	9	.....	.....	61	.....
7	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	5	.....	.....	.....	.....	.....	.....	4	.....	.....	7	.....
7	.....	.....	.....	.....	.....	.....	.....	1	1	.....	5	.....	.....	1	1	.....	.....	4	.....	.....	9	.....
4	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1	2	.....	.....	9	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....	1	.....	.....	.....	1	.....	.....	2	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....	.....	.....	1	.....	.....	2	.....
.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	3	.....
4	.....	.....	.....	.....	.....	.....	1	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	2	.....	.....	.....	.....	.....	1	.....
8	1	.....	.....	.....	.....	.....	.....	1	4	.....	3	.....	.....	1	.....	1	1	2	.....	.....	13	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	3	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
2	.....	.....	.....	.....	.....	1	.....	.....	2	.....	1	.....	.....	.....	1	1	.....	.....	.....	.....	8	.....
3	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	1	.....	3	.....	.....	3	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....	3	.....
5	.....	1	.....	.....	.....	.....	.....	1	5	.....	5	.....	1	4	6	.....	1	8	2	.....	28	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....	1	3	1	.....	1	.....	.....	9	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	.....	.....	4	.....
2	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1	.....	.....	.....	1	.....	.....	4	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	.....
4	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....
38	.....	.....	.....	.....	.....	.....	.....	2	5	.....	22	.....	.....	5	6	8	.....	19	1	.....	66	.....
5	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	2	.....	.....	1	.....	.....	.....	1	.....	.....	9	.....

Preventable Diseases

INCIDENCE OF DISEASE FOR MONTH OF DECEMBER, 1927

(As compared with previous years)

A comparison of the daily morbidity reports received during the month of December, 1927, with the corresponding month for the years 1922, 1923, 1924, 1925 and 1926.

	Average 1922-1926 for Dec.	Mean 1922-1926 for Dec.	1922	1923	1924	1925	1926	1927
Cerebrospinal Meningitis ..	3	4	4	4	1	4	2	1
Diphtheria	255	293	370	305	293	185	123	196
Encephalitis Epidemic	4	5	2	....	7	5	4	1
Measles	501	225	1234	886	71	787	225	193
Poliomyelitis	3	2	2	7	2	2	2	5
Scarlet Fever	440	436	436	474	824	276	288	302
Smallpox	1	....	2	1	....	....	....	....
Typhoid Fever	22	27	14	27	33	30	8	6
Tuberculosis Pulmonary	102	105	116	114	105	85	89	97
Whooping Cough	201	222	280	116	222	224	163	470

A comparison of the morbidity of these diseases for the two preceding months, October and November with the December record is as follows:

	October	November	December
Cerebrospinal Meningitis	5	....	1
Diphtheria	142	136	186
Encephalitis Epidemic	2	2	1
Measles	47	105	193
Poliomyelitis	42	16	5
Scarlet Fever	113	223	302
Smallpox	....	....	....
Typhoid Fever	18	18	6
Tuberculosis Pulmonary	146	100	97
Whoop.ng Cough	157	332	470

Cases of Other Reportable Diseases

Chickenpox	428	Septic Sore Throat	10
Conjunctivitis Infectious....	4	Gonorrhoea	166
Encephalitis Epidemic	1	Syphilis	167
German Measles	8	Chancroid	3
Influenza	51		
Mumps	146	Total	984

Cases of Occupational Diseases

Mercury	6	Dermatitis	2

Cases of Certain Reportable Diseases

December, 1927

	Population Est. as of July 1, 1927	Typhoid Fever	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Meningitis Cerebrospinal	Poliomyelitis	Pulmonary Tuberculosis	Other Forms Tuberculosis	Pneumonia Lobar	Broncho-Pneumonia	Other Com. Diseases
State Total	**1,586,435**	**6**	**193**	**302**	**470**	**196**	**1**	**5**	**97**	**11**	**180**	**123**	**984**
NEW HAVEN CO.	475,419	1	171	39	217	23		1	24	2	37	23	298
New Haven	184,727		145	18	93	13			6	1	10	5	148
Waterbury	105,960	1		5	4	4			9		15	5	38
Meriden (city and town)	36,807		23	8	19	1			5	1	4	10	42
Ansonia	19,548							1	1		1		14
West Haven	18,834				8	1			1				3
Naugatuck	16,829												
Wallingford (town and boro)	12,659								1		1		
Milford	14,673			1	1								15
Derby	12,963										2		1
Hamden	10,718		2	1	24	1			1			1	9
Branford (town and boro)	7,073			1									6
Seymour	8,321			3	5	3							
Towns under 5,000	26,307		1	2	63						4	2	22
FAIRFIELD CO.	**379,505**	**1**	**3**	**77**	**98**	**61**	**1**	**1**	**19**	**2**	**37**	**21**	**123**
Bridgeport	174,890	1		17	6	37			14	1	28	14	29
Stamford (city and town)	48,515		1	10	59	1	1				3	2	25
Norwalk	30,173			3		2							
Danbury (city and town)	21,931			4					2		1		7
Greenwich (town and boro)	26,373		1	20	1	8		1	1		1	2	12
Stratford	17,451			1		1							
Fairfield	15,541			3	5	2			2		1		7
Shelton	11,699				4	1					2		6
Westport	5,772			2		6							
Towns under 5,000	27,160		1	17	23	3				1	1	3	37
HARTFORD CO.	**402,344**	**1**	**16**	**74**	**41**	**88**			**27**	**5**	**57**	**47**	**290**
Hartford	168,258		1	24	23	34			16	3	15	15	136
New Britain	71,068		1	16	7	8			1	1	11	11	48
Bristol (city and town)	26,087			10		9			1		4	2	16
Manchester	21,992			4	6	13			1		9	6	9
Enfield	13,241		1	5							1	1	6
East Hartford	14,311		1	4	2				3				2
Southington (town and boro)	9,925		1	7		1					6	1	2
West Hartford	11,908					1			2		4	3	14
Windsor	6,732					1			1				3
Glastonbury	6,206	1									1	3	7
Wethersfield	5,264				3	1					1		12
Plainville	5,064												
Towns under 5,000	42,288		11	4		20			2	1	5	5	35
NEW LONDON CO.	**114,930**	**1**	**2**	**76**	**101**	**5**		**2**	**12**	**1**	**15**	**4**	**64**
Norwich (city and town)	30,689	1		26	13	3			4	1	8		11
New London	30,149		1	34	71				4		1		16
Stonington (town and boro)	11,041		1	3									5
Groton (town and boro)	11,326			2	17	2			1		1		8
Towns under 5,000	31,725			11				2	3		5	4	24
LITCHFIELD CO.	**80,900**			**6**	**4**	**1**			**3**		**7**	**5**	**28**
Torrington (town and boro)	25,316												1
Winchester (inc. Winsted)	9,109												
Plymouth	6,459					1					2	2	1
Watertown	7,506			2								2	2
Towns under 5,000	32,510			4	4				3		5	1	24
WINDHAM CO.	**56,258**	**1**		**25**	**3**	**6**		**1**	**5**	**1**	**5**	**6**	**41**
Windham (inc. Willimantic)	14,418	1		10					2	1	2	1	2
Putnam (city and town)	9,220			1	2	2			1		2	1	10
Plainfield	8,818			12				1	1			2	5
Killingly (inc. Danielson)	9,384												6
Thompson	5,226			2		4			1		1	1	1
Towns under 5,000	9,192				1							1	17
MIDDLESEX CO.	**49,279**	**1**	**1**		**6**	**9**			**6**		**21**	**14**	**134**
Middletown (city and town)	22,032				2	4			3		15	12	110
Middletown State Hospital									2		2		
Towns under 5,000	26,347	1	1		4	5			1		4	2	24
TOLLAND CO.	**27,800**			**5**		**3**			**1**		**1**	**3**	**6**
Vernon (inc. Rockville)	8,751								1				
Stafford (town and boro)	5,472											2	2
Towns under 5,000	13,577			5		3					1	1	4

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Connecticut Health Bulletin

"For a Clean State and a Healthy People"

Vol. 42 February, 1928 No. 2

SPECIAL ARTICLES

Occupational Diseases

Connecticut Standard Test for Dirt in Milk

Behavior—A Health Problem

A Nation Wide Campaign for Early Diagnosis of Tuberculosis

STANLEY H. OSBORN, M. D., C. P. H., Commissioner

Issued Monthly by the

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HARTFORD

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MONTHLY HEALTH BULLETIN

Vol. 42 February, 1928 No. 2

OCCUPATIONAL DISEASE*

By Albert S. Gray, M. D., Chief
Division of Occupational Diseases

In order to have some knowledge of occupational disease it is necessary to know something of the development of industry. In a last analysis industry may be defined as the means human intelligence employs to secure the existence of the race. Occupational disease may be defined as injuries and disturbances of health contracted in industrial pursuits and other vocations in life as a result of exposure to poisonous agencies, infectious organisms or other conditions dangerous to health. That sounds a bit involved, possibly, but when you consider the particular causes of occupational disease the meaning becomes evident. They are, broadly speaking, exposure to dust, dirt, dampness, bad air, extremes of temperature, fatigue, inactivity, infections and industrial poisons.

Early Industry a One-Man Affair

Probably occupational disease has existed from the time Mr. Stonehatchet fashioned his deadly weapon to dispatch the unwary deer to provide the family meals, and Mrs. Stonehatchet performed the remainder of the family duties. But it was not until the development of the modern factory system that the existence of occupational disease began to be realized. Back in the early days production took place in the home for individual consumption from raw materials furnished by the household itself. Later, custom production somewhat widened the field by producing for the immediate neighborhood. Up to this time there had been no great concentration of industrial population, though even in early times there was an effort to localize industry. We are told the father of Demosthenes had a knife factory in which thirty slaves worked and that the Romans during their occupation of Britain established a clothing and pottery manufactory.

Beginning of the Factory System

The factory system probably began in Italy in the beginning of the 16th century with the manufacture of silk and woolen goods and in France, England, Holland and Germany similar developments took place.

The invention of the spinning jenny, the spinning wheel and later, the patent loom, laid the foundation of a tremendous growth in the textile industry and with the invention of

*Radio talk broadcast over WTIC, January 26, 1928

the steam engine in 1785 permitting the change from water to steam power, a tremendous impetus was given mechanical and manufacturing industry. With the development of the modern factory system people flocked from nearby places to supply the demand for labor and gradually there took place in manufacturing districts great concentrations of population.

Then it was that occupational disease and accidents appeared. It soon became apparent in countries in which factory methods developed, England, France, Germany and Italy, that industry was exacting a heavy toll. According to historical records in 1761, fifty per cent of the English population died before the age of twenty and in 1833 in Manchester the average age of the working class was only twenty-two as compared to forty-four among the upper classes. It was realized that a study must be made of conditions that were so terribly affecting the working population.

Employment of Children an Early Problem

It was during this time of industrial development that the employment of children began to assume the proportion of a national calamity.

In England, we are told, the greater number of children were pauper apprentices bound out by parochial authorities to mill owners; others, the children of very poor or callous parents, little more than infants, sometimes not more than seven years old, were condemned to labor for long hours—thirteen or more a day—at tasks requiring unremitting attention and in rooms badly ventilated and otherwise injurious to health. It is not to be wondered that occupational disease was rife under such lamentable conditions.

First Protective Acts

The first Legislative Act in England to protect children was the Chimney Sweeps Act of 1788 but it was not until the passage of an act in 1834 that effectual work could be done. Previous to these acts we are told the children, who had to be small to negotiate flues only seven inches in diameter, were stolen for the purpose or sold by their parents for a few pounds; were driven up the chimney and probably made to climb by a straw fire lighted beneath them; that many, submerged in soot in narrow or horizontal flues, were suffocated and that they generally slept in cellars with a bag of soot for a bed and another for a coverlet.

One of the first statutes dealing with labor in England was passed in the early years of Elizabeth's reign and prescribed the hours of labor by injunction, thus from the middle of the month of March to the middle of September all laborers hired by time were to be and continue at their work at or be-

fore five o'clock in the morning and continue at work and not depart until between seven and eight of the clock at night. In winter months the work was from five A. M. until dark. The legal days work was to be about twelve hours at the least.

Gradually, laboriously up through the years, conditions slowly improved. Restrictive Legislation concerned itself first with the hours of labor and the employment of women and children; later, the guarding of dangerous machinery and elimination, limitation and control of industrial processes as experience and necessity dictated, until finally the development of Departments of Labor, Factory Inspection, Boards of Industrial Hygiene and Occupational Disease, Industrial Insurance and Workmen's Compensation. In recent years considerable research work has been done by various agencies on the effects of industrial poisons and processes.

We have come a long way since the beginning of the modern factory system but there still remains much to be done. New inventions and processes each bring their particular problem.

Present Recognition of Human Element

Since the war, with its restriction of immigration and the growth of industry in size and complexity, industry has begun to realize that the human element is its most valuable asset. Factory managers now appreciate the fact that occupational disease is an industrial waste and they are taking measures to prevent it by the employment of engineers and experts familiar with ventilating and lighting problems and various industrial processes, and physicians who have specialized in the work to treat those cases that do occur.

Safeguarding the Workers' Health

In Connecticut a law provides for the reporting of all cases of occupational disease by the physicians to the State Department of Health. The Legislature of the State, realizing the importance of the health of its people to the community, has made an appropriation for a Division of Occupational Disease as part of the State Department of Health, in order that industry may be assisted in eliminating the harmful effect of certain necessary materials and processes—as the handling of certain metals, lead, zinc, mercury, etc.; the subjection to acids, fumes, poisons and dust in certain processes; the effect of poor lighting and improper temperature; and the effect of new processes, as the making of enamels, lacquers, artificial silks, etc., upon the health of the people engaged in the industry.

These facts and the development of an intelligent appreciation by the individual of the danger of the industrial proc-

esses in which he may be engaged, and a realization that his health is his most valuable heritage, will carry us far, for truly his health is his capital, his stock in trade. With it he can attain that degree of independence and fulfill his obligations to a degree only limited by his natural capacity. Without it he is bankrupt, and as the individual is dependent upon his health for the fulfillment of his highest obligations, so is industry, the community, the very nation itself, dependent for their greatness on the health of its people.

CERTAIN CONNECTICUT LAWS RELATING TO OCCUPATIONAL DISEASES

Reports of Occupational Diseases

Rev. 1918, Sec. 2416, (as amended in 1923, Chap. 93.) Every physician having knowledge of any person whom he believes to be suffering from poisoning from lead, phosphorus, arsenic, brass, wood alcohol or mercury or their compounds, or from anthrax, or from compressed-air illness or any other disease, contracted as a result of the nature of the employment of such person, shall, within forty-eight hours, mail to the State Department of Health a report, stating the name, address and occupation of such patient, the name, address and business of his employer, the nature of the disease and such other information as may reasonably be required by said department. The department shall prepare and furnish to the physicians of this state suitable blanks for the reports herein required. No report made pursuant to the provisions of this act shall be evidence of the facts therein stated in any action at law against any employer of such diseased person. Any physician who shall fail to send any report herein required or who shall fail to send the same within the time specified herein, shall be liable to the state for a penalty of not more than ten dollars, recoverable by civil action in the name of the state by said department. For each such report the physician making the same shall receive a fee of fifty cents, to be paid by the State Department of Health as a part of its office expenses.

Authorizing The State Department of Health to Investigate And Make Recommendations for the Elimination or Prevention of Occupational Diseases

Acts of 1927, Chap. 326. Section 1. The state department of health is authorized to investigate and to make recommendations for the elimination or prevention of occupational diseases which have been reported to it or which shall be reported to it in accordance with the provisions of chapter 93 of the public acts of 1923. Said department is also authorized to study and provide advice in regard to conditions that may be suspected of causing occupational diseases.

CONNECTICUT STANDARD TEST FOR DIRT IN MILK

By Friend Lee Mickle, A. B., M. S.

During 1926 it was called to the attention of the State Department of Health that the milk sediment test as being carried out in various laboratories in the state doing milk examinations was not as uniform as might be desirable. The matter was investigated and a meeting of all laboratory workers engaged in milk examinations was called at the State Capitol. The meeting was well attended and a thorough discussion of the matter was secured.

Former Standards Not Uniform

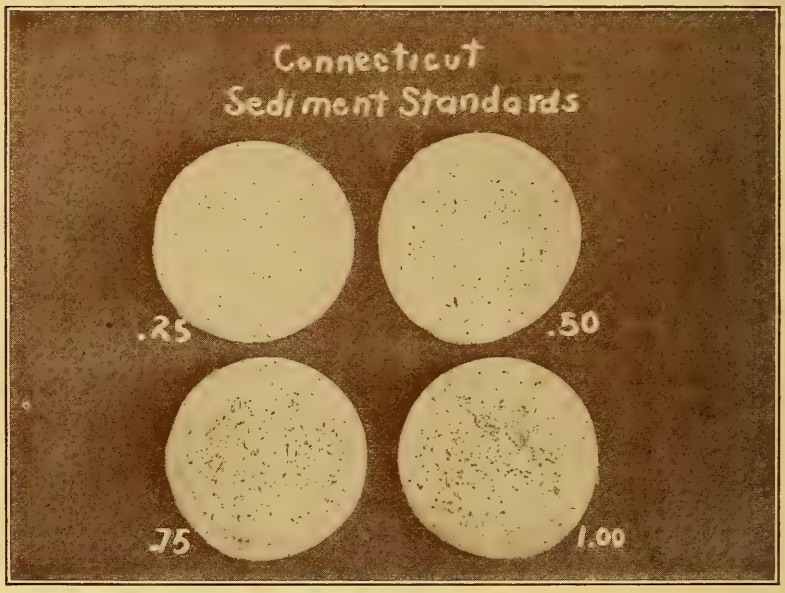
At that time the Fourth Edition of the Standard Methods of Milk Analysis of the American Public Health Association was the official method throughout the country. It provided that each sample of milk be filtered through a cotton disc in a specified manner to allow all the visible dirt in the sample to be caught and retained upon the disc where it could be estimated or scored by comparing it with standard discs prepared by adding weighed amounts of dirt to milk. Such standards were prepared by each laboratory following the standard procedure. The standards in use at the various laboratories were brought to the meeting by request and a comparison of them made it quickly evident that no very close uniformity could be expected from the use of such widely divergent standards as they proved to be. Some of the standards had been prepared within the year and others had been in use for several years. It also appeared that the sizes of the particles of dirt on the different standards varied greatly and that the kinds of dirt used in the different laboratories varied in color to a greater extent than had previously been thought possible.

A committee was appointed to make investigations and prepare a set of standard discs that might be photographed and prints of the photograph distributed as standards for use of each laboratory in order to procure greater uniformity in carrying out the test. The committee conferred with the referee of the Standard Methods of the American Public Health Association and learned that the Fifth Edition of Standard Methods would contain a similar photograph.

Adaption of Standard for Connecticut

No action was taken until the Fifth Edition appeared, and then the photograph in the Standard Methods was found to be inadequate as a guide for Connecticut since most of the milk examined in Connecticut laboratories is bottled milk

and is cleaner, almost without exception, than the cleanest disc pictured in Standard Methods and graded as fairly clean. Connecticut milk is apparently cleaner than that being sold on the average throughout the United States. It was also found that Standard Methods allowed for the use of any one of several types of testers and discs and was not as specific in regard to many other details as the committee thought desirable for Connecticut use.



Connecticut Standard for Making Milk Sediment Test*

At a second meeting in January, 1928 the report of the state committee was adopted with slight changes. An additional photograph of discs showing, respectively, .25, .50, .75 and 1.00 milligrams of dirt per pint was adopted and the Wisconsin or Lorenz model of sediment tester chosen as the standard. The supplementary photograph, which is shown above, sets the standard for grading milk between clean and fairly clean as listed in section 7 of the committee report. The exact method of carrying out the sediment test as adopted is given on the next two pages.

*An actual photograph should be secured for use in grading samples of milk. This cut is not sufficiently distinct.

Sediment Test Method Adopted at Meeting of Milk Labratory Workers on January 9, 1928 For Use By All Connecticut Approved Laboratories

(This supersedes all previous committee reports)

1. The method for the sediment test given in Standard Methods of Milk Analysis of the American Public Health Association and the Association of Official Agricultural Chemists, 5th edition, pages 32-34, was adopted. The following additional procedures which are not in conflict with those of Standard Methods were adopted to meet Connecticut conditions.

2. Pint samples only shall be regarded as standard. Where quart or any other size of sample is used, report must state the size used. (The question of whether or not these results should be calculated to a pint basis, as recommended by the committee, was left undecided for later action with the provision that meantime each laboratory may so calculate or not as they prefer).

3. Only the Wisconsin (Lorenz model) sediment tester shall be used.

4. Only the discs of the type furnished by the manufacturer of the Lorenz model shall be used, although they may be purchased from any source.

5. The sediment discs obtained from filtering samples of milk shall be graded against the photographs on page 33 of Standard Methods or against the extra prints of these photographs obtainable from the American Public Health Association, 370 Seventh Avenue, New York, N. Y. (These cost 75 cents each for either set A, B, or C or $2.25 for the three sets pictured on page 33).

6. Standard Methods directions shall be interpreted to mean that no person shall prepare standards by adding dirt to milk.

7. The photograph shows five gauges as follows:

Clean	
Fairly clean	1.25 mg. dirt per pint
Slightly dirty	2.50 mg. dirt per pint
Dirty	3.75 mg. dirt per pint
Very dirty	5.00 mg. dirt per pint

All samples shall be reported by one of the five descriptive terms above and also scored in terms of either 1.25, 2.50, 3.75 or 5.00 which are figures representing milligrams of dirt per

pint. In order to avoid confusion the two figures at the right of the decimal point should always be used whether or not the last figure is a cipher.

8. Percentage-clean figures and terms other than the above for expressing dirt in milk shall be completely abandoned.

9. No sample showing more than 1.25 milligrams dirt per pint shall be reported within closer limits than the five gauges given above, the dairyman being given the benefit of any doubt in deciding between any two of the five gauges.

10. Standard Methods state where bottled milk is examined it should not show even 1.25 mg. dirt per pint. For milk reported as clean there shall be, for Connecticut use, an additional standard photograph of discs showing, respectively .25, .50, .75 and 1.00 mg. dirt per pint. (Copies of this photograph may be obtained from the Bureau of Laboratories, State Department of Health, Hartford, Connecticut at 50 cents apiece mounted either on 3″ x 5″ or 4″ x 6″ filing cards, so long as the supply of both sizes lasts, providing you state a preference in ordering).

11. All milk samples graded as clean shall be reported in the following terms which are figures representing a milligram or fractions of a milligram of dirt per pint:

Clean	no dirt
Clean	.25
Clean	.50
Clean	.75
Clean	1.00

12. No clean samples shall be reported within closer limits than the five grades on the photograph, the dairyman being given the benefit of any doubt.

13. The discs shall be returned to the dairyman, health or dairy official, or milk inspector, together with the report.

Acknowledgment: The committee is indebted to Mr. James A. Newlands, State Chemist, President of the Henry Souther Engineering Company of Hartford, and to Mr. James Curran of that organization for experimental photographic work on the standards.

Jessie W. Fisher, M. D.
Katherine Marden
Friend Lee Mickle, Chairman
Harriet Bixby, Secretary

BEHAVIOR—A HEALTH PROBLEM

By Winifred W. Arrington, A.B., M.S.S.

Every September health bulletins the country over are flooded with cautions to parents to send the child to school one hundred per cent healthy. Parents in response are recognizing the importance of maintaining health and forestalling disease. But what is one hundred per cent health? Too often we think the whole child accounted for when we can answer the roll call of bodily organs with negatives and rule out dangerous bacteria. But is our complacency justified? What of mental hygiene? We are forgetting, are we not, that the child spends twenty-four hours a day under the control of mental attitudes and emotional habits which vitally influence health. Can we afford to ignore thus summarily the entire intellectual and emotional economy of the individual?

The Tragedy of Misfits

In any program of disease prevention mental disorders have certainly earned a place which no longer requires demonstration. Not mental disease only, but nervous maladies of all sorts and the infinite number of personality twists which burden society with misfits. Between 1900 and 1925, according to statisticians, there has been an increase of 400 per cent in the number of homicides in this country. The present rate is estimated at 10,000 a year. Suicides are occurring in the United States at the approximate rate of 15,000 annually. At this moment, according to figures based on the last federal census, nearly 300,000 persons are confined in this country's hospitals for the insane. New admissions are predicted at the rate of 75,000 a year. Think of it! Seventy-five thousand cases of mental breakdown annually. Almost four-fifths the number of diphtheria cases reported to the U. S. Public Health Service for the year 1925. Nearly twice the number of smallpox cases reported for the same year. And eleven times the number of infantile paralysis victims. These armies of the suicidal, homicidal and insane represent individuals who have had a wrong start in life. They are recruited largely from a group that a few years back made up the children in our public schools. The future, unless we take some action, is equally discouraging. Out of the group of active five-year-olds who last September entered the kindergartens of our country, an astounding percentage will graduate not into good citizenship, but into state hospitals for the insane, into careers of crime, and into frustrated lives. Here is tragedy! What better challenge could come to preventive technique!

Behavior the Mental Pulse

Behavior is the index to mental adjustment—good or bad —the mental pulse and temperature chart. For years psychiatrists have been studying behavior. They have been developing a knowledge of it, and reducing this knowledge to an accurate science. Experts among them now assure us that in the first three to six years of life the foundations of personality are laid. In these years, they point out, our earliest and firmest behavior patterns become establishd and many of these behavior patterns, or habits, can never be altered. Consequently, if we form habits that handicap us, our mental efficiency and personal happiness are conditioned for life. There remains a gap between our natural capabilities and our actual achievements. We find ourselves inadequate to meet the situations life presents, and it is out of this habitual inadequacy, we are told, that mental disease and "nervous breakdown" often spring.

Responsibility for Child's Mental Health

Prevention therefore requires an attack upon the early developmental years—an attack upon parent-child relationships and parental influences in the infantile and pre-school periods. A campaign for preparedness, if you will!

Upon fathers and mothers, psychiatrists indicate, as upon no one else, devolves responsibility for the child's mental health. Parents who fail through ignorance cannot be blamed, but the movement for mental hygiene now seeks to eliminate ignorance and keep parents informed. From time to time the State Department of Health, through its Division of Mental Hygiene, will publish short articles in this bulletin as guide posts on various aspects of the parent-child relationship.

Watch for these articles!

A NATION WIDE CAMPAIGN FOR THE EARLY DIAGNOSIS OF TUBERCULOSIS

To procrastinate with tuberculosis is to gamble with death. The hope ultimately of conquering this disease lies in our ability to take action promptly. This, in turn, depends upon efficiency in discovering all cases of tuberculosis before they have had opportunity to spread the infection.

An Educational Drive Necessary

These facts have been shouted from the housetops for the past twenty years. But doctors still report that most cases of tuberculosis which come to them for their first examination are found to be in an advanced stage of the disease. A recent census of patients in tuberculosis sanitoria in the United States shows that only 16 per cent are diagnosed as early cases on entrance.

Perhaps the educational barrage of the past two decades has been too scattered. Perhaps a new generation untouched by the old message has arrived. At any rate, this seems to be the strategic time to consolidate the scattered gains of the past and to concentrate public attention on the important fundamentals about tuberculosis.

Intensive Campaign in March

During March, 1928, tuberculosis and health associations of the United States, will conduct an intensive publicity campaign to emphasize the importance of the early diagnosis of tuberculosis.

The aim of the campaign is twofold, first to focus the attention of the public at large upon the danger signs of early tuberculosis and to urge them to go to their doctor for examination; and second, to stimulate renewed interest on the part of the medical profession in the recognition of early signs of tuberculosis.

Medical Profession to Assist

The American Public Health Association, at its annual meeting held in Cincinnati, October, 1927, endorsed by resolution the plan of the campaign and offered to lend assistance to the movement. The American Medical Association has agreed to stimulate the interest of the medical profession through its **Journal** and to interest the lay public by publishing articles and editorials on the subject in **Hygeia**.

Publicity Plans

State, county and city tuberculosis and health associations will organize meetings where talks will be given, motion pic-

tures shown and pamphlets distributed, all emphasizing the importance of early diagnosis. The National Tuberculosis Association is preparing several million pieces of printed matter for distribution through its affiliated associations. A motion picture for lay audiences to be called "Let Your Doctor Decide," and another for medical groups entitled "The Doctor Decides," will be used in the campaign.

The text of the standard circular and of all the printed matter has been approved for accuracy of statement by a committee of the National Tuberculosis Association. The entire campaign will be financed out of the proceeds of the Christmas seal sale.

Besides posters, motion pictures and other methods of publicity, the press, ever alert to popular interests, may be counted on to publish articles of information and news, telling about the progress of the campaign.

In short, every effort will be put forth to make the effectiveness and extent of this tuberculosis educational drive equal to that of the annual campaign for the sale of Christmas seals, which has been so uniformly successful. If the effort succeeds, similar concentrated educational campaigns will be planned for succeeding years.

All medical, health, social and civic organizations, both non-official and official, are urged to participate in this movement. A united, nation-wide campaign will help greatly to focus attention upon this question.

The State Department of Health is heartily in sympathy with this movement since it realizes that such concerted action will help to focus attention on the preventive aspect of tuberculosis and thereby stimulate individual effort to seek medical aid early, when danger signals first appear.

Connecticut in 1927 had 1696 cases and 1059 deaths from tuberculosis all forms.

These were distributed as follows:

Tuberculosis Cases and Deaths 1927

	Cases	Deaths
Pulmonary tuberculosis	1511	925
Other forms tuberculosis	185	134
All forms	1696	1059

For further details concerning the campaign, address any local or state tuberculosis or public health association.

Laboratories

SUMMARY OF BUREAU ACTIVITIES

JANUARY, 1928

	DIAGNOSTIC					Exam-
	+	—	?	Unclass- ified	Speci- mens	ina- tions
Typhoid	1	234	....	....	235	235
Paratyphoid A	....	235	....	....	....	235
Paratyphoid B	3	232	....	....	....	235
Diphtheria	106	2054	....	....	1100	2160
Diphtheria Virulence	30	78	....	....	83	108
Vincent's Angina	10	913	....	....	1	923
Hemolytic Streptococci	59	865	....	....	....	924
Tuberculosis	25	195	....	....	220	220
Syphilis	530	2588	117	....	2352	3235
Gonorrhoea	39	79	....	....	118	118
Pneumonia	4	1	....	....	5	5
Rabies	3	4	....	....	5	7
Glanders	....	1	....	....	1	1
Special specimens	4	10	....	56	21	70
					4141	8476

CHEMICAL AND BACTERIOLOGICAL

Milk samples	334	343
Water samples	190	190
Sewage samples	16	16
Trade Waste samples	1	1
Sea Food samples	4	5
Clinical thermometers	666	666
Totals	5352	9697
Total laboratory procedures		19782

Vital Statistics

MONTH OF DECEMBER

TOTALS FOR THE YEAR, 1927, 1926, 1925

Year	Births	Birth Rate*	Marriages	Mar. Rate*	Deaths	Death Rate*
1927	28,473	18.0±.1	12,064	7.6±.1	16,661	10.5±.1
1926	29,219	18.7±.1	12,357	7.9±.1	18,321	11.8±.1
1925	29,852	19.5±.1	12,321	8.1±.1	17,686	11.6±.1

*Rates per 1,000 population.

The figures given above are tentative results of the year's registration of vital statistics. While they are not final by any means they will serve as an advance index of the review which will appear in the March Bulletin when the records of the past five years will be discussed.

It is immediately apparent that there has been a great reduction in the birth rate. Two, at least, of the immediate causes contributing to this reduction are, first, a reduction in the marriage rate and second, a reduction in the infant mortality rate.

By far the most astonishing record in the above summary of the last three years is the low death rate of 1927. This rate of 10.5 is the lowest ever recorded, the previous low rate being 11.3 in 1924. A reduction of two or three tenths in death rate is what may normally be expected, but a reduction of **one** and **three tenths** units is epoch making in the vital statistics of the state. This will be better set forth in the March Bulletin.

Births

During the month records of 2233 births were received, yielding a monthly rate, converted to annual basis, of 16.9 per 1,000 population. This is a low rate but it is by no means as low as the rate of 15.7 recorded in November.

Of towns having 5,000 or more inhabitants, 22 reported more births in 1927, for December, than for the same month in 1926 and 10 of these reported increases of 10 or more. They are:

Bridgeport	15±22	New Haven	12±23
Derby	13±8	Norwalk	19±10
Greenwich	10±8	Stafford	13±6
Manchester	15±8	Stamford	12±12
Meriden	11±11	Stonington	11±5

These increases are divided in two parts for each entry. Thus, Stafford had an increase of 13 with ± 6 associated with it. This ± 6 is called the standard deviation or dispersion due to pure chance. Any change which is two or more times its dispersion is considered to be statistically significant. The dispersion for Stafford is 6, and twice 6 is of course 12. The increase of 13 therefore is more than twice its dispersion and is significant—significant of the fact that more births occurred in Stafford than might normally be expected. Applying this criterion, of twice the dispersion, it will be seen that Manchester (approximately), Norwalk (approximately), Stafford and Stonington are the only towns where there was an increase in the number of births over the amount that might be expected to result from pure chance variation.

Records of 82 stillbirths were reported, making the total number of births 2315. This means that in every 1,000 births there were 35.4 stillbirths. In 1926 there were 89 stillbirths, to give a total number of births of 2353 and therefore stillbirths appeared at a rate of 37.8 per 1,000 births. These rates of 35.4 and 37.8 show no important difference. The stillbirths seem to run with great constancy at a rate between 30 and 40 per 1,000. This is not so with respect to the sex ratio. Stillbirths run very decidedly to the male. This statement will not be borne out by the figures for the month alone, for the sex distribution of the stillbirths was 42 male and 40 female, a sex ratio of 105 males to 100 females, a sex ratio which would closely approximate the ratio in the living births. The month therefore is a bit out of the ordinary in this respect, for this sex ratio may run as high or higher than 140 to 100. In November, for example, the sex ratio was 144 to 100.

Deaths

Once again the record of the month as far as number of deaths was concerned resulted in fewer deaths than for last year. In 1927 for December 1475 deaths were reported, 136 less than the 1611 recorded in 1926. The death rate of 11.2 is the lowest to appear in the last six years. And so the year ends favorably—extremely favorably. A new low record death rate has been established and it only remains to gather together a few late reports and analyze the figures. This analysis will appear in the March Bulletin.

The month itself resulted in the following comparative list to include a selected few of the many possible causes of death.

Cause of Death	1927	1926	Increase	Decrease
Diseases of the heart	251±16	289±17	....	38±23
Epidemic encephalitis	1±1	1±1	....	....
Pneumonia, undefined	1±1	0	1±1	....
Typhoid fever	1±1	1±1	....	....
Measles	0	2±1	....	2±1

Cause of Death	1927	1926	Increase	Decrease
Scarlet fever	4±2	2±1	2±2	....
Whooping cough	3±2	2±1	1±2	....
Diphtheria	13±4	13±4	....	....
Influenza	29±5	35±6	....	6±8
Tuberculosis, pulmonary	70±8	91±10	....	21±13
Tuberculosis, other forms	8±3	18±4	....	10±5
Cancer	140±12	153±12	....	13±17
Cerebrospinal meningitis	0	0	....	....
Poliomyelitis	0	1±1	....	1±1
Lobar pneumonia	75±9	88±9	....	13±13
Broncho pneumonia	60±8	73±9	....	13±12
Diarrhoea and enteritis under 2	10±3	10±3	....	....
Puerperal diseases	9±3	18±4	....	9±5
Accident	85±9	95±10	....	10±13
Suicide	12±3	15±4	....	3±5
Homicide	2±1	1±1	1±1	....
Other causes	701±26	703±26	....	2±38
Totals	1475±38	1611±40	5	141

In analyzing the increases or decreases above the same criterion must be applied as was done earlier in the article. Thus values must be selected as significant only when such increase or decrease is at least twice its standard deviation. There are not many in the list above which satisfy this condition. Measles, tuberculosis, other forms and puerperal diseases are the only ones, and a point is stretched in including puerperal diseases. Over working the stretching point is a dangerous statistical pastime, but in monthly figures which fluctuate rather widely, and the temptation was to say "wildly", some elasticity of interpretation may possibly be permitted.

Occasionally there is significance to figures which do not appear in the increase or decrease column and absence from the increase column is not alone enough to insure complacency. In the list above, glance at diphtheria. There were 13 deaths in 1927 and 1926. These 13 are just exactly 13 more than should have occurred in either year. The time will come of course when there is less diphtheria than typhoid and surely typhoid is no longer a problem. The protection of children by treatment with toxin antitoxin will absolutely prevent diphtheria. The list above includes 13 who are forever removed from the possibility of this absolute preventive measure. As far as diphtheria is concerned they could still be citizens of this state had proper preventive treatment been used.

Of the accidental deaths 28 were due to automobile accidents as compared with 22 last year. Some of this increase may be charged to the absence of snowfall this year whereas in December last year there was a heavy fall of snow in the early part of the month which no doubt caused many to stop driving.

FOR SIX YEARS—DECEMBER, 1927

CONNECTICUT	1922	1923	1924	1925	1926	1927
BIRTHS	2424	2411	2508	2354	2264	2233
Birth Rate	20.1	19.6	20.0	18.5	17.4	16.9
MARRIAGES	733	796	732	630	629	602
Marriage Rate	6.1	6.5	5.8	4.9	4.8	4.6
DEATHS	1618	1396	1463	1559	1611	1475
Death Rate	13.4	11.4	11.7	12.2	12.4	11.2
COMMUNICABLE DIS.* DEATHS	189	170	154	155	147	120
Per Cent to Total Deaths	11.7	12.2	10.5	10.0	9.1	8.1
DEATHS UNDER 1 YEAR	211	168	159	180	162	158
Rate Per 1,000 Births	79.8	65.4	60.0	72.5	67.3	66.6

*Includes Typhoid Fever, Measles, Scarlet Fever, Whooping Cough, Diphtheria, Tuberculosis Pulmonary, Cerebrospinal Meningitis, Poliomyelitis, Influenza.

DEATH RATE of 10.5

FOR THE YEAR 1927

IS THE LOWEST EVER RECORDED!

See the March Bulletin for a More Detailed Analysis

Statistics
December, 1927

	Population Est. as of July 1, 1927 Based on U. S. Census	TOTALS				DEATH RATES			AGE GROUPS		
		Births	Stillbirths	Marriages	Deaths	All Causes (per 1,000 population)	Tuberculosis (per 1,000 population)	Children under 1 year (per 1,000 births)	Under 1 year	1 to 5 years	65 years and over
State of Connecticut	1,586,435	2233	82	602	1475	11.2	0.5	66.6	158	44	594
Ansonia	19,548	12	.....	5	12	7.4	1.8	104.3	2	.....	2
Branford	7,073	6	1	.....	6	10.2	1.7	.....	.....	.....	2
Bridgeport	174,890	260	8	32	148	10.2	0.5	62.8	16	6	47
Bristol	26,087	47	2	12	21	9.7	.....	17.8	1	.....	12
Danbury	21,931	45	3	5	32	17.5	1.6	22.9	1	2	17
Derby	12,963	41	.....	1	7	6.5	.....	57.8	2	.....	2
East Hartford	14,311	16	1	8	16	13.4	0.8	240.0	3	.....	9
Enfield	13,241	11	2	4	6	5.4	.....	.....	.....	.....	2
Fairfield	15,541	13	1	5	9	6.9	.....	89.6	1	1	5
Glastonbury	6,206	5	.....	.....	2	3.9	.....	.....	.....	.....	2
Greenwich	26,373	38	2	51	19	8.6	.....	47.5	2	.....	8
Groton	11,326	11	.....	7	11	11.7	.....	109.1	1	.....	5
Hamden	10,718	7	.....	3	15	16.8	4.5	140.4	2	.....	6
Hartford	168,258	338	8	61	147	10.5	0.6	55.1	19	11	46
Killingly	9,384	4	1	13	6	7.7	.....	.....	.....	.....	3
Manchester	21,992	42	1	8	18	9.8	.....	30.6	1	.....	7
Meriden	36,807	66	.....	8	41	13.4	0.7	102.7	6	3	16
Middletown	22,932	36	.....	.....	22	11.5	1.0	20.8	1	.....	10
Milford	14,673	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Naugatuck	16,829	7	.....	8	15	10.7	.....	300.0	3	.....	6
New Britain	71,068	110	6	23	47	7.9	0.7	53.6	7	2	15
New Haven	184,727	275	3	96	154	10.0	0.5	48.5	15	2	62
New London	30,149	51	4	31	40	15.9	0.4	105.7	7	.....	18
Norwalk	30,173	64	4	10	44	17.5	0.8	52.0	3	2	22
Norwich	30,689	54	5	11	34	13.3	.....	48.2	3	1	17
Plainfield	8,818	11	1	.....	8	10.9	1.4	186.0	2	1	1
Plainville	5,064	.....	.....	.....	2	4.7	.....	.....	.....	.....	1
Plymouth	6,459	4	.....	2	4	7.4	.....	.....	.....	.....	2
Putnam	9,220	10	2	7	12	15.6	2.6	.....	.....	.....	4
Seymour	8,321	2	.....	.....	3	4.3	.....	.....	.....	.....	2
Shelton	11,699	7	.....	1	8	8.2	.....	.....	.....	.....	5
Southington	9,925	11	.....	2	11	13.3	.....	69.8	1	.....	4
Stafford	5,472	23	1	5	2	4.4	.....	64.2	1	.....	1
Stamford	48,515	78	5	35	38	9.4	.....	64.5	6	.....	9
Stonington	11,641	16	1	5	9	9.8	.....	93.8	1	.....	4
Stratford	17,451	12	.....	.....	12	8.3	0.7	210 5	3	.....	1
Thompson	5,226	4	.....	2	5	11.5	.....	.....	.....	.....	3
Torrington	25,316	45	1	4	22	10.4	0.9	.....	.....	2	3
Vernon	8,751	15	.....	2	11	15.1	1.4	.....	.....	.....	7
Wallingford	12,659	3	.....	3	15	14.2	1.9	.....	.....	1	11
Waterbury	105,960	178	6	27	97	10.9	0.5	80.6	15	3	23
Watertown	7,506	7	.....	5	12	19.2	.....	303.8	2	2	2
West Hartford	11,908	17	.....	5	21	21.2	.....	255.0	5	.....	7
West Haven	18,834	31	3	10	26	16.6	.....	.....	.....	1	16
Westport	5,772	1	.....	2	8	16.6	2.1	.....	.....	.....	4
Wethersfield	5,264	2	.....	3	11	25.1	2.3	.....	.....	.....	8
Winchester	9,109	13	1	.....	11	14.5	2.6	.....	.....	.....	6
Windham	14,418	24	.....	8	10	8.3	.....	80.8	2	.....	6
Windsor	6,732	2	.....	1	3	5.3	.....	210.5	1	.....	.....
Towns under 5,000	209,106	158	9	71	223	12.8	0.3	119.7	23	4	113
Other States		.....	.....	.....	19	.....	.....	.....	.....	.....	10

DEATHS FROM IMPORTANT CAUSES

Diseases of the Heart	Encephalitis Epidemic	Pneumonia Undefined	Typhoid Fever	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Influenza	Tuberculosis-Pulmonary	Tuberculosis Other form.	Cancer	Meningitis-Cerebrospinal	Poliomyelitis	Pneumonia—Lobar	Pneumonia—Broncho	Diarrhoea-Enteritis Under 2	Puerperal Diseases	Accident	Suicide	Homicide	Institutional Deaths	Non-resident Deaths
251	1	1	1	.....	4	3	13	29	70	8	140	.....	.....	75	60	10	9	85	12	2	540	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	6	.....
.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....	.....	1	.....	.....	.....	2	.....	.....	3	.....
26	.....	.....	.....	.....	.....	.....	6	4	8	.....	8	.....	.....	10	11	.....	.....	11	1	.....	72	.....
6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	1	.....	.....	7	.....
2	.....	.....	.....	.....	.....	.....	.....	2	3	.....	4	.....	.....	3	.....	.....	.....	1	.....	.....	8	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....	.....	3	.....
4	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....	2	.....
3	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	1	2	.....	.....	.....	.....	.....	1	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
2	.....	.....	.....	.....	1	.....	1	1	.....	.....	2	.....	.....	.....	1	.....	.....	1	1	.....	6	.....
4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....	.....	.....	2	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	4	.....	.....	.....	.....	.....	1	.....	.....	2	.....	.....	6	.....
24	.....	.....	.....	.....	.....	.....	3	1	8	.....	11	.....	.....	3	4	4	1	11	3	.....	70	.....
3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	.....	.....	2	.....	.....	.....	.....	.....	.....	9	.....
4	.....	.....	.....	.....	.....	.....	.....	1	2	1	1	.....	.....	2	1	1	.....	3	.....	.....	16	.....
4	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	4	.....	.....	.....	.....	.....	.....	3	1	.....	9	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	2	.....	.....	.....	1	.....	.....	4	.....
5	.....	.....	.....	.....	.....	1	.....	.....	4	.....	4	.....	.....	4	4	1	1	2	.....	.....	16	.....
27	1	1	.....	.....	.....	.....	.....	3	8	2	21	.....	.....	6	4	.....	1	5	2	.....	50	.....
9	.....	.....	.....	.....	1	.....	.....	.....	1	.....	4	.....	.....	2	1	.....	.....	2	.....	.....	19	.....
3	.....	.....	.....	.....	.....	.....	1	3	2	1	2	.....	.....	2	2	.....	1	3	.....	1	16	.....
3	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	5	.....	.....	4	3	.....	.....	2	.....	.....	7	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....	2	.....	.....	.....	.....	.....	2	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	4	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	3	.....
.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....	.....	.....	.....	.....	.....	3	.....	.....	3	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
5	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	7	.....	.....	2	4	.....	.....	3	.....	.....	11	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....	4	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	1	1	4	.....	.....	2	.....	.....	.....	.....	.....	.....	4	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
3	.....	.....	1	.....	.....	.....	1	.....	2	.....	1	.....	.....	3	2	.....	.....	2	.....	.....	8	.....
1	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	2	.....
3	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	1	1	.....	.....	1	.....	.....	10	.....
13	.....	.....	.....	.....	.....	.....	.....	2	4	2	6	.....	.....	6	3	.....	1	4	1	.....	44	.....
3	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	2	1	.....	.....	1	.....	.....	2	.....
6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	1	2	.....	3	.....	.....	12	.....
6	.....	.....	.....	.....	.....	1	.....	1	.....	.....	7	.....	.....	1	.....	.....	1	.....	.....	.....	8	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	2	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	2	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	1	2	.....	.....	.....	.....	.....	3	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	3	.....
52	.....	.....	.....	.....	2	1	.....	2	5	1	21	.....	.....	9	6	2	3	10	3	1	68	.....
8	.....	.....	.....	.....	.....	.....	1	.....	1	.....	2	.....	.....	1	.....	.....	.....	.....	.....	.....	7	.....

Preventable Diseases

INCIDENCE OF DISEASE FOR MONTH OF JANUARY, 1928

(As compared with previous years)

A comparison of the daily morbidty reports received during the month of January, 1928, with the corresponding month for the years 1923, 1924, 1925, 1926 and 1927.

	Average 1923-1927 for Jan.	Mean 1923-1927 for Jan.	1923	1924	1925	1926	1927	1928
Cerebrospinal meningitis ..	4	5	8	1	5	....	5	2
Diphtheria	229	246	299	274	246	185	139	177
Encephalitis epidemic	4	3	2	3	6	4	3	3
Measles	1170	809	2066	809	231	2600	145	606
Poliomyelitis	1	1	1	1	2	....	2	3
Scarlet fever	555	459	459	741	810	338	428	496
Smallpox	1	....	4	2	....	....	....	125
Typhoid fever	11	11	7	8	15	12	11	5
Tuberculosis Pulmonary	129	121	119	167	121	122	114	133
Whooping Cough	308	313	350	313	306	332	238	516

A comparison of the morbidity of these diseases for the two preceding months, November 1927 and December 1927 with the January 1928 record is as follows:

	Nov. 1927	Dec. 1927	Jan. 1928
Cerebrospinal Meningitis	....	1	2
Diphtheria	136	196	177
Encephalitis Epidemic	2	1	3
Measles	105	193	606
Poliomyelitis	16	5	3
Scarlet Fever	223	302	496
Smallpox	....	....	125
Typhoid Fever	18	6	5
Tuberculosis Pulmonary	100	97	133
Whooping Cough	332	470	516

Cases of Certain Other Reportable Diseases

Chickenpox	582	Smallpox	125
Encephalitis Epidemic	3	Tetanus	2
Favus	1	Gonorrhoea	173
German Measles	17	Syphilis	184
Influenza	23	Chancroid	6
Malaria	1	Conjunctivitis Infectious ..	3
Mumps	390		
Paratyphoid Fever	3	Total	1525
Septic Sore Throat	12		

Cases of Occupational Diseases

Brass Poisoning	2	Mercurial Poisoning	6

Cases of Certain Reportable Diseases

January, 1928

	Population Est. as of July 1, 1927	Typhoid Fever	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Meningitis Cerebrospinal	Poliomyelitis	Pulmonary Tuberculosis	Other Forms Tuberculosis	Pneumonia Lobar	Broncho-Pneumonia	Other Com. Diseases
State Total	1,613,874	5	606	496	516	177	2	3	133	11	253	145	1525
NEW HAVEN CO.	483,603	2	571	56	215	29	.....	.....	67	8	68	34	385
New Haven	187,705	.....	454	10	112	8	.....	.....	45	7	21	9	247
Waterbury	107,908	1	6	10	11	6	.....	.....	7	.....	14	7	50
Meriden (city and town)	37,085	.....	74	10	37	1	.....	.....	2	.....	10	10	38
Ansonia	19,805	.....	.....	5	2	.....	.....	.....	4	.....	.....	2	5
West Haven	19,334	1	11	3	16	2	.....	.....	3	.....	4	2	7
Naugatuck	17,069	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Wallingford (town and boro)	12,747	.....	.....	.....	1	.....	.....	.....	1	.....	2	.....	1
Milford	15,273	.....	1	1	1	1	.....	.....	.....	.....	1	.....	5
Derby	13,194	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	1
Hamden	11,002	.....	10	1	13	2	.....	.....	2	.....	.....	.....	12
Branford (town and boro)	7,133	.....	2	4	2	1	.....	.....	2	.....	5	2	6
Seymour	8,526	.....	.....	8	.....	4	.....	.....	.....	.....	.....	.....	.....
Towns under 5,000	21,792	.....	13	4	20	4	.....	.....	1	1	8	2	12
FAIRFIELD CO.	387,138	.....	10	117	128	54	2	1	22	.....	59	24	180
Bridgeport	179,163	.....	3	24	10	35	.....	.....	18	.....	36	12	43
Stamford (city and town)	49,923	.....	1	7	45	.....	.....	.....	1	.....	6	1	33
Norwalk	30,537	.....	.....	3	1	3	.....	.....	1	.....	.....	1	15
Danbury (city and town)	21,931	.....	.....	35	.....	5	1	.....	.....	.....	3	1	14
Greenwich (town and boro)	26,956	.....	3	19	18	3	.....	.....	.....	.....	7	4	17
Stratford	17,451	.....	.....	1	.....	.....	.....	1	1	.....	2	.....	2
Fairfield	16,091	.....	1	5	16	5	.....	.....	.....	.....	1	.....	.....
Shelton	12,000	.....	.....	1	2	.....	.....	.....	.....	.....	.....	1	.....
Westport	5,862	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	1
Towns under 5,000	27,224	.....	1	21	36	3	1	.....	1	.....	4	4	55
HARTFORD CO.	411,342	3	19	151	40	70	.....	1	30	1	89	59	563
Hartford	172,288	1	8	33	28	35	.....	.....	13	.....	41	23	263
New Britain	72,654	1	5	14	1	3	.....	1	3	.....	13	5	76
Bristol (city and town)	26,820	.....	2	6	.....	1	.....	.....	5	.....	2	4	25
Manchester	22,478	.....	1	9	3	7	.....	.....	.....	.....	6	1	26
Enfield	13,445	.....	.....	6	.....	1	.....	.....	1	.....	2	3	7
East Hartford	14,311	.....	.....	.....	1	1	.....	.....	.....	.....	1	1	5
Southington (town and boro)	10,123	.....	1	2	4	.....	.....	.....	1	1	4	.....	5
West Hartford	12,763	.....	1	18	.....	2	.....	.....	2	.....	8	4	61
Windsor	6,880	.....	.....	1	3	1	.....	.....	.....	.....	5	1	3
Glastonbury	6,288	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	2	7
Plainville	5,191	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wethersfield	5,387	.....	.....	.....	.....	.....	.....	.....	1	.....	2	1	7
Towns under 5,000	42,714	1	1	61	.....	19	.....	.....	4	.....	5	14	78
NEW LONDON CO.	116,306	.....	2	102	96	7	.....	.....	5	1	14	11	109
Norwich (city and town)	30,762	.....	2	23	2	3	.....	.....	1	1	3	.....	11
New London	30,770	.....	.....	55	71	1	.....	.....	2	.....	3	6	10
Stonington (town and boro)	11,152	.....	.....	2	.....	.....	.....	.....	1	.....	.....	1	5
Groton (town and boro)	11,607	.....	.....	9	20	3	.....	.....	.....	.....	5	.....	13
Towns under 5,000	32,015	.....	.....	13	3	.....	.....	.....	1	.....	3	4	70
LITCHFIELD CO.	81,518	.....	1	24	2	5	.....	1	1	.....	9	11	27
Torrington (town and boro)	25,453	.....	.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....
Winchester (inc. Winsted)	9,144	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Plymouth	6,554	.....	.....	.....	.....	1	.....	1	.....	.....	2	3	1
Watertown	7,732	.....	.....	2	.....	.....	.....	.....	.....	.....	1	1	2
Towns under 5,000	32,635	.....	1	20	2	4	.....	.....	1	.....	5	7	24
WINDHAM CO.	56,717	.....	2	41	5	5	.....	.....	2	.....	3	2	53
Windham (inc. Willimantic)	14,509	.....	.....	23	.....	.....	.....	.....	1	.....	.....	.....	4
Putnam (city and town)	9,334	.....	.....	2	3	2	.....	.....	.....	.....	.....	.....	18
Plainfield	8,909	.....	.....	9	.....	.....	.....	.....	.....	.....	.....	.....	3
Killingly (inc. Danielson)	9,517	.....	1	.....	.....	1	.....	.....	1	.....	2	.....	9
Thompson	5,252	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Towns under 5,000	9,196	.....	1	5	2	2	.....	.....	.....	.....	1	2	19
MIDDLESEX CO.	49,372	.....	1	1	29	6	.....	.....	4	1	9	3	185
Middletown (city and town)	23,000	.....	.....	.....	2	1	.....	.....	.....	1	2	1	100
Middletown State Hospital	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	6
Towns under 5,000	26,372	.....	1	1	27	5	.....	.....	2	.....	7	2	79
TOLLAND CO.	27,878	.....	.....	4	1	1	.....	.....	2	.....	2	1	23
Vernon (inc. Rockville)	8,751	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stafford (town and boro)	5,490	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Towns under 5,000	13,637	.....	.....	3	1	1	.....	.....	2	.....	2	1	23

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Connecticut Health Bulletin

"For a Clean State and a Healthy People"

Vol. 42 **March, 1928** **No. 3**

SPECIAL ARTICLES

Protecting the Public Against Fake Doctors

Mortality in Connecticut in 1926-1927

Social Hygiene Education

Field Test for Examining Milk

STANLEY H. OSBORN, M. D., C. P. H., Commissioner

Issued Monthly by the

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HARTFORD

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MONTHLY HEALTH BULLETIN

Vol. 42 March, 1928 No. 3

PROTECTING THE PUBLIC

AGAINST FAKE DOCTORS

There seems to be no length to which fake doctors will go to secure for themselves a living at the expense of an unsuspecting public. Witness the case of one Filadelfia Siracusano of Derby, Connecticut, whose fake diploma headed Columbia University signed by and delivered to himself, and whose fake Medical Board certificate also hand forged have been reproduced in the succeeding pages of this bulletin.

Local evidence that Siracusano was practicing medicine without a license was presented to the State Department of Police who assigned an officer to investigate the case. An officer went to Siracusano's office for medical attention and was given a prescription and a charge of two dollars was made, whereupon Siracusano was arrested by the officer and taken to the Shelton Police Station where he admitted that he had faked both license and diploma. On December 19, 1927, the case came up in Shelton where he was found guilty and fined $150.00 and costs.

On the two following pages appear facsimiles of the two "documents" that decorated the office of this "self made doctor."

Columbia University

NEW YORK, N. Y.

Diploma

THIS IS TO CERTIFY THAT

Dr. Filadelfio Siracusano, M.D.

has complited the Course from this Medical Faculty prescribed by this Univesity and has satisfactorily passed its Examination.

Given at New York, in the State of New York, this 7 Year

day of June 28 A. D. 1927.

Dr Stendall
Supervisor

Dr George Alexander
Director

Dr W King
Dean

Medical Board Hartford Connecticut

This to Certify that

Dr. Filadelfio Siracusano M.D.

has completed the examinations from this Medical Surgeon Board. To exercise State of Connecticut. Reg. # 5789.

day of July 15 A.D. 1927

Dean

MORTALITY IN CONNECTICUT 1923—1927

by William C. Welling

All rates per 100,000 population unless otherwise stated.

Diseases	Mean Rate	Dispersion	Trend	Chance Dispersion	Lexian Ratio	Lexian Ratio ex Trend
All Causes	11.46*	±.5	**−.25±.12**	±.1	5.0	3.5
Infant Mortality	69.7**	±6.0	**−3.16±1.3**	±1.4	4.3	2.8
Typhoid Fever	2.1	±.6	**−.37±.08**	±.36	1.7	0.7
Scarlet Fever	2.8	±.9	**−.61±.1**	±.43	2.1	0.7
Whooping Cough	6.0	±2.1	**−1.37±.3**	±.64	3.5	1.7
Diphtheria	8.7	±2.9	**−1.95±.3**	±.74	4.0	1.3
Influenza	27.7	±8.1	**−2.19±2.5**	±1.3	6.5	5.8
Tuberculosis, All Forms	76.2	±7.6	**−3.83±1.8**	±2.2	3.4	2.4
Tuberculosis, Pulmonary	68.0	±6.7	**−4.34±.9**	±2.1	3.2	1.3
Pneumonia	106.4	±13.7	**−3.82±4.2**	±2.6	5.3	4.8
Cancer	104.7	±3.4	**+1.98±.7**	±2.6	1.3	0.8
Diarrhea, under 2	17.4	±3.5	**−2.40±.3**	±.7	4.7	1.3
Suicide	12.4	±1.2	+.10±.4	±.9	1.3	1.3
Accidents	70.5	±2.0	−.94±.5	±2.2	0.9	0.7

*Per 1,000 population **Trends** in bold face type are significant.
**Per 1,000 living births.

The death rate found by dividing all the deaths by the population expressed in units of 1,000 is called the crude death rate. It is an emergency index of the general health conditions of the state. It should be corrected for residence and age characteristics if different states are to be compared. The rate of 10.6 for the year is by far the lowest ever recorded. The previous low was 11.3 in 1924. The average over the period 1923-1927 is 11.46. The scattering about the mean or average, called the dispersion or standard deviation* is only ±.5. The general death rate is relatively sluggish in its variation, unless upset by catastrophe. Yet in the five years under discussion the trend is down at the rate of 0.25±.12 a year. The 0.25 is the actual trend downward and the ±.12 is the standard deviation of the trend. Any value to be of any dependability must be at least twice its standard deviation. The trend in the general death rate, therefor, is of significance where by significance is meant dependability and mathematical reliability.

Typhoid Fever

The rate of 1.1 per 100,000 population is the lowest ever to be recorded in the history of the state. It is an indication of the triumph of prevention over a disease which was at one

*For a brief discussion of dispersion, chance dispersion, trend and Lexian Ratio, see the Bulletin for March, 1927, Vol. 41, No. 3, pages 56, 57.

time one of the major problems of public health. The mean rate is 2.1 for the last five years, a small scatter about the mean of ±.6 and even if the rates are relatively low there is a downward trend of .37±.08 which shows that the disease will probably continue to decline. Though it must be remembered that some residual typhoid fever will very likely always be with us. The Lexian Ratios indicate a series which is not far from normal; being somewhat hypernormal when the trend is left in and slightly subnormal when the trend is removed.

Infant Mortality

Another low record—a rate of 58.8 infant deaths per 1,000 living births. Over the five years an average of 69.7, considerable scatter about the mean which is to be expected in a range from 76.3 to 58.8. A trend downward at the rate of 3.16±1.3 per year; a rather large Lexian Ratio of 4.3, meaning that the actual scatter about the mean is 4.3 times what might be expected to arise from pure chance. With the trend excluded the Ratio becomes 2.8, still rather high signifying that trend alone is not throwing the series out of normality but that there are other factors.

Scarlet Fever

Still another record low death rate of 11.4 per 100,000 population. An average rate of 2.8, a small scatter of ±.9 about the mean and a definite trend downward of 0.61±.1 per year. With the trend included the Lexian Ratio is 2.1 and decreases to 0.7 when the trend is excluded. The indications are that the treatment of scarlet fever by antitoxin is beginning to bear fruit.

Whooping Cough

The rate of 2.5 is the lowest since 1885. Average for the last five years 6.0. Scattering of ±2.1, which is not unduly high and trend downward very decidedly of 1.37±.3. The Lexian Ratio is a bit high at 3.5 and about 50 per cent of it is due to the trend. Whooping cough is erratic and the series indicates this through the Lexian Ratios.

Diphtheria

In 1889 the death rate for diphtheria was 97.7. In 1927 it was 5.9. In 1926 it was 5.3, which is the lowest rate ever recorded. The increase in 1927 over 1926 is unfortunate, and the more so because of all diseases there is none so easily or simply prevented as diphtheria through the use of toxin antitoxin. Evidently the public still has much to learn. The aver-

age rate is 8.7, scatter of ±2.9, trend downward of 1.95±.3, Lexian Ratio of 4.0 with trend included and 1.3 with trend excluded.

Influenza

This is perhaps the classic disease for erratic career. Always endemic it may burst into pandemic proportions. One thing is certain—as an example of worthless statistics influenza furnishes excellent material. The mean rate is 27.7, large scatter of ±8.1, negative, that is, downward trend of 2.19±2.5 per year, large Lexian Ratios of 6.5 and 5.8. Note that the standard deviation of the trend is ±2.5 which is larger than the trend itself. Above it was stated that a value to be of reliability must be at least twice its standard deviation. Surely any value, as the trend of influenza, which may fluctuate by its own value, i.e. by 100 per cent of itself, is worthless.

Tuberculosis (all forms)

This is another record. Compare the rate of 244.0 in 1885 with the rate of 66.8 in 1927. Note that in 1923 the rate was 89.3. There is a great range in only the last five years, from 89.3 to 66.8. With this variation no inconsiderable scatter must be expected. The mean rate is 76.2, dispersion ±7.6. Trend is down at the rate of 3.83±1.8 per year. The Lexian Ratios are not unduly high but there is no marked reduction when the trend is excluded.

Tuberculosis (Pulmonary)

If the course of the rates for the last five years is observed for pulmonary tuberculosis and also for other forms of tuberculosis it will be noted that the rates for other forms do not change very much, while rates for pulmonary tuberculosis are being substantially reduced year by year. The average rate for five years is 68.0, scatter of ±6.7, trend downward of 4.34±.9 and Lexian ratios of 3.2 and 1.3. The effect of eliminating the trend is much more pronounced in pulmonary tuberculosis than in all forms of the disease. Evidently the inclusion of other forms is a disturbing factor.

Pneumonia

In Connecticut pneumonia is a serious problem. Since 1885 in only two years has the rate been under 100 deaths per 100,000 population. It was 97.2 in 1921 and in 1927 it was 84.8 which is therefore the record low rate since 1885. This is indeed remarkable, but there is great room for further improvement. The statistics well exhibit the erratic course

of the various forms. The mean rate, 1923-1927 is 106.4. Large standard deviation of ±13.7, a fictitious trend downward of 3.82±4.2 and large Lexian Ratios of 5.3 and 4.8. Truly as unfavorable a statistical picture as influenza. It is to be noted that if any year is favorable there will in general be a low death rate from the pneumonias.

Cancer

Of the major problems attracting the attention of public health workers the cancer situation is perhaps the most important at present. Discounting the effect of better diagnosis now when comparing the past with the present it seems reasonably certain that the cancer death rate is increasing.

In 1927 there was a very slight increase over 1926, but not a noteworthy change. The average rate for the past five years is 104.7. There is scatter about the mean, but not very large, being ±3.4. There is an upward trend of 1.98±.7 and this is a definite and significant tendency. A year ago it was not significant. The Lexian Ratios are interesting. They are low. With the trend included the series is not far from normal. Excluding the trend the series is slightly subnormal.

Diarrhea and Enteritis Under 2

The decrease in infantile diarrhea has been truly remarkable. However, it must be remembered that to refer such deaths to the entire population for a rate is open to criticism. The correct population would be the infants under two. And as there has been a marked decrease in the number of births, and consequently a decrease in the population of infants, it might well be possible that the decrease in rates is not as real as it might appear to be. With these precautions it is to be noted that the mean rate for five years has been 17.4, standard deviation of ±3.5, downward and definite trend of 2.40 ±.3. The Lexian ratio is high with the trend included and the series is nearly normal with the trend excluded.

Suicide

In the last year or two considerable attention has been directed to suicides, especially suicides of young people. There is absolutely nothing in the statistics to cause the slightest alarm. The rate is a bit high, to be sure, but the scatter is small, no definite trend and nearly normal Lexian Ratios.

Accidents

The death rate from accidents is a bit lower for 1927 than for 1926. The average rate is 70.5, relatively small standard

deviation of ± 2.0 a fictitious trend downward of $.94 \pm .5$ and Lexian Ratios show that with the trend included the series is nearly normal and subnormal with the trend excluded.

Summary

Nineteen hundred twenty-seven was the record year in the history of Connecticut vital statistics. The following death rates are record low rates for the State of Connecticut.

General Death Rate	**10.6***
Infant Mortality	**58.8****
Typhoid Fever	**1.1**
Scarlet Fever	**1.4**
Whooping Cough	**2.5**
Tuberculosis, (all forms)	**66.8**
Tuberculosis, Pulmonary	**58.4**
Diarrhea, Under 2	**11.2**

*Per 1,000 population.

**Per 1,000 living births.

All other rates per 100,000 population.

PROVISIONAL SUMMARY FOR FIVE YEARS, DEATHS AND DEATH RATES IN CONNECTICUT, 1923—1927

All rates per 100,000 population unless otherwise stated

As of February 24, 1928

YEAR		TOTAL DEATHS	DEATH RATE, PER 1,000 POPULATION	DEATHS UNDER ONE	INFANT MORTALITY RATE*	TYPHOID FEVER	MEASLES	SCARLET FEVER	WHOOPING COUGH	DIPHTHERIA	INFLUENZA	TUBERCULOSIS PULMONARY	TUBERCULOSIS OTHER FORMS	PNEUMONIA ALL FORMS	CANCER	POLIOMYELITIS	CEREBROSPINAL MENINGITIS	DIARRHEA and ENTERITIS (UNDER 2)	PUERPERAL STATE	SUICIDE	ACCIDENT
1923	Deaths	17,733	12.0	2350	76.3*	38	160	53	133	187	562	1166	152	1878	1449	10	45	314	183	196	1057
	Rate					2.6	10.8	3.6	9.0	12.7	38.1	79.0	10.3	127.3	98.2	0.7	3.1	21.3	5.9*	13.3	71.6
1924	Deaths	16,991	11.3	2176	68.5*	38	47	58	78	168	289	1049	176	1529	1565	23	23	298	182	155	1062
	Rate					2.5	3.1	3.9	5.2	11.2	19.2	69.8	11.7	101.8	104.1	1.5	1.5	19.8	5.7*	10.3	70.6
1925	Deaths	17,686	11.6	2180	73.0*	39	39	45	112	126	407	997	156	1672	1646	19	12	284	149	192	1111
	Rate					2.5	2.5	2.9	7.3	8.2	26.6	65.1	10.2	109.3	107.6	1.2	0.8	18.6	4.9*	12.6	72.6
1926	Deaths	18,321	11.8	2100	71.9*	29	195	35	95	83	559	1054	166	1693	1663	6	10	250	187	216	1103
	Rate					1.8	12.5	2.2	6.1	5.3	35.9	67.6	10.6	108.6	106.7	0.4	0.6	16.0	6.4*	13.9	70.8
1927	Deaths	16,755	10.6	1700	58.8*	17	21	22	40	94	299	926	134	1345	1694	16	10	178	164	190	1059
	Rate					1.1	1.3	1.4	2.5	5.9	18.8	58.4	8.4	84.8	106.8	1.0	0.6	11.2	5.7*	12.0	66.8

*Per 1,000 Living Births

	Populations of Connecticut	Births	Birth Rates
1923	1,475,122	30,826	20.9
1924	1,502,405	31,808	21.2
1925	1,529,688	29,852	19.5
1926	1,558,996	29,219	18.7
1927	1,586,435	28,884	18.2

SOCIAL HYGIENE EDUCATION*

By Daniel E. Shea

Sex education, or better social hygiene education, includes all the educational measures which in any way may aid young people to secure the preparation necessary to meet the problems and difficulties of life that center about the sex instinct. More especially it embraces the knowledge essential to the fullest self-realization and the richest appreciation of life. No one believes in the establishment of courses devoted entirely to sex and its implications. This would be unsound from a mental hygiene view point. On the contrary, sex education is a term to indicate to teachers and parents that the curriculum can be used intelligently, with a view to securing a healthy, normal, and wholesome attitude toward life as it is affected by sex in its manifold expressions. In fact it is not our intention to introduce new subjects but rather to include the very necessary facts that have been deleted from already accepted subjects.

Sex education seeks to establish a healthful normality of sex ideas and to release them from the unhygienic influences of suspicion, of mysticism, of doubt, of question, and self-accusation. This represents a constructive positive attitude toward the subject and provides an adequate basis for intelligent thinking, feeling, and self-guidance for the adolescent age. Herein lies an opportunity for the development of practical principles concerning public opinion, modesty, standards of morality, the bases of comradeship, for an acceptance of standards of conduct consonant with personal and social ideals. It substitutes a thoughtful attitude for one of frivolity; it makes for frankness and honesty in place of secrecy and hypocrisy; it develops an appreciation of the part that personal sex hygiene plays in the maintenance of a healthful and effective physical and mental life; it develops responsibility concerning the social and ethical aspects of sex.

A New Era

The twentieth century has undoubtedly brought to us a new era. No greater proof have we than the fact that today we discuss venereal diseases openly, whereas a quarter of a century ago they were spoken of behind closed doors, and then only in a whisper. "Our Times", a book by Mark Sullivan, describes Fifth Avenue, New York, in 1900 as a street filled with horse-drawn vehicles and a solitary automobile, while today we have a street filled with automobiles and one horse. At no other time in history has there been such a change. The

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fact itself is indeed startling, but the short space of time in which it was accomplished is significant. It illustrates the readiness with which America will adapt itself to a new idea. Witness, if you will, the rusting rails of the abandoned trolley long replaced by the fast moving bus, or the unbobbed woman trying to find a hat to fit; realize, if you will, the promptness with which the public accepts such products as balloon tires, radio, dry ginger ale, electric refrigeration, and oil heating.

Recognizing this new era in business, we must also be mindful of the fact that we have the same condition in our educational system. Not so many years ago, people were of the opinion that education was some form of a vacuum. All that was necessary was the filling up of this tube or bottle with a specific amount of learning and then sealing it up. Today we find that this is not the case as may be seen by the popularity of such institutions as the continuation schools and the eagerness manifested in accepting our evening school and college extension course. This interest manifested in business and education by the adult of today has also been accepted by the youth. Instead of criticizing his actions and comparing them with the actions of the youth of our times, rather we should study the child and endeavor to understand him.

Unconsciously we recall our own childhood days and remember the reverence held for our grandmother for instance. We bring back a memory of the formalities indulged in at her approach. On her entrance there was a rush on the part of the children to bring her chair. That chair was held sacred and no one would think of using it. Beside it was her basket of knitting that the children would immediately place in her lap when she was seated. Her word was law and her hour for retiring was the curfew for the family. We are wont to believe that the youth of today does not show that respect. I quite disagree. There is just as much love and respect as ever, but there is a different method of demonstrating it. Then again we lose sight of the fact that the grandmother of today, instead of being satisfied with her rocker and knitting, is entertaining at bridge, or perchance, is attending the latest Broadway production. It is the tempo of the age and youth has adopted it.

Need for Undistorted Basic Knowledge

This brings us back to the subject of education, particularly character education of which sex education plays such an important part. I am informed by educators that sex education and its best method of approach is really one of the important problems with which they are confronted. This is more complicated if they are handicapped by an endeavor

on the part of the parents to permanently shield the child from acquiring information about sex and reproduction. True, it is the exceptional home that can take over the entire problem of sex education. However the foundation must of necessity be constructed in such a manner that the child on entering the primary school will be equipped with some slight undistorted knowledge of the subject.

To accomplish this it might be necessary to enter the home in order to instruct the parent. When the parent realizes that the child would never know the function of a muscle unless it was explained to him and that a knowledge of the function of the kidney, bladder and genitals are as important as the heart, lungs and other organs, we will have established the first step in bringing to that child a knowledge of this important subject. It is an accepted fact that cleanliness of body leads to health and so likewise cleanliness in character is very necessary for health and development in the individual.

A Socialized Not a Physical Problem

In harmony with this rapidly developing psychology of education, it becomes necessary to formulate educational rules in relation to sex. In this way we will bring about sex education so that it will be vastly more than instructions concerning sex. It will necessitate comprehensive and progressive processes of guidance and examples extending from infancy to maturity. Sex education must be looked upon as a socialized process, not a physical problem.

As a phase of character formation, sex education must include all the instuctions and training that may help to form normal and wholesome attitudes in relation to sex, as well as to shape the conduct in accordance with these attitudes and ideals.

The opinion in the past was that the home alone was the proper agency for instructing the growing child and adolescent in the facts of sex which were considered essential to his own welfare, as well as to impart to the child a realizatios of his responsibility to society. In introducing the program of sex education in the schools it is not the intention to place the whole responsibility upon the teaching forces nor on the other hand to allow them to usurp the entire right to such teaching; it is far better to recognize the desirability and even necessity of home influence, not alone in instilling proper ideals of behavior in the child, but also in furnishing the foundation of elementary knowledge concerning sex and reproduction upon which the school may later build. In this manner the school will supplement the home, and in turn the home will supple-

ment the various agencies with which the child comes in contact during his impressionable years.

The Scope of Sex Education

In sex teaching it is essential to consider, first, the peculiar nature of the adolescent and, second, the objectives that this instruction has in view. One of the most important is that boys and girls shall grow into men and women who have so far mastered and directed their impulses that they may be made to serve the higher purpose of the individual. They must forsake the prudish attitude toward sex which long neglect has begotten. They must learn to regard sex in its normal light. We want them to have high ideals of personal responsibility, especially in their dealings with others. We want them to have high standards of human values and high aspirations for human achievement.

The Competent Teacher

It is obvious that these objectives will not be attained by a study of books or a routine "learning of lessons", but rather by contact with personalities who will assist the boys and girls to discover, discuss and reflect upon matters of responsibility, self-control, life values, and the great problems of adjustment, of achievement, of self-sacrifice, of mastery, and of service. Such personalities must be found among the teaching personnel who will need the following qualifications: (1) a knowledge of the facts of sex physiology and psychology; (2) a wise and broad moral outlook; (3) a genuine pathy with the young, an insight into their sensitive shyness, a comprehension of their personal difficulties, and the skill to speak to them simply, frankly, and humanly.

The Three-Fold Nature of Sex Education

We can now classify the educational service which this subject requires of the high school under the following three heads: (1) Informational, which comes chiefly in connection with courses having a biological foundation, such as botany, zoology, biology, agriculture, physiology, hygiene, home nursing; (2) interpretative, which comes chiefly in courses dealing with human nature and human relations, such as literature, history, psychology, sociology, economics, civics, home-making courses; and (3) inspirational, which comes not from school subjects but from people. This may be supplied by living contemporaries of the pupil's daily program, and is one of the most important fields of the teacher's influence, but it may be reinforced by the companions of fiction or history.

These three phases of educational service should be supplemented with ample opportunity for physical, social, and esthetic activities that will serve as an outlet for the surplus energies of the adolescent and as experience in dealing with others under varying conditions. Thus may the school become a school of life, not only through laboratory study and recitations but through intelligent guidance for the emotional life of the pupil as well.

Sex Education a Preventive Measure

In closing I might say that many persons regard sex education as merely dwelling upon the venereal diseases, their mode of origin, and their personal effects. Venereal diseases are more important socially than personally, particularly as they bear a direct relationship to such afflictions as paresis and cerebrospinal syphilis, and may play a part in the development of mental deficiencies, all of which constitute mental conditions requiring communal care. Gonorrhea, with its vast number of sequelae, such as blindness, afflictions of the joints and heart, the infections of mates with the possibility of surgical operations, belongs in the category of preventable diseases. The degree to which such a disease can be prevented conduces to safer conditions for normal mental functioning. In so far as sex education may lead to the prevention of this venereal disease, it constitutes a definite practical adjunct to mental hygiene.

Syphilis, as a factor in infant mortality, in mental deficiency, in epilepsy after age 40, and in the causation of some of the psychoses, is responsible for a vast amount of personal, familial, and social distress. Sex education again as a factor in lessening the prevalence of this devastating disease contributes to the sum total of mental health and this is a hygienic factor of great social importance.

Vital Statistics

MONTH OF JANUARY

Totals for the first month of the year, 1928, 1927, 1926

Year	Births	Birth Rate*	Marriages	Mar. Rate*	Deaths	Death Rate*
1928	2162	16.1±.1	621	4.6±.06	1601	11.9
1927	2318	17.5±.1	742	5.6±.06	1642	12.4
1926	2570	19.8±.1	776	6.0±.06	1674	12.9

*Rates per 1,000 population.

It will be observed in the figures above that the birth rate is very low, as it has been for some time. The marriage rate is also low and if the correlation between the birth rate and the marriage rate were figured it would be found to be significantly positive. This would of course be expected and is relevant of no statistical fact.

The death rate is encouragingly low. Evidently 1928 is getting away to another favorable start as did 1927, which established many low records. The survey at the end of this article, showing the past six years, will exhibit the low incidence of a few of the more important communicable diseases.

Births

Copies of 2,162 birth certificates were received in the department. This low number of births yields a birth rate of only 16.1, which is the lowest to appear in the past six years. The average rate is about 19.4 and the scatter about the mean is ±2.0, not as great, perhaps, as might have been expected.

A year ago, beginning in January, the department began the system of allocating the births to the town of residence of the mother. This was merely for statistical count, there being no actual change or transfer of records. Therefore the records of 1927 were not strictly comparable to 1926. But 1928 and 1927 will be more suitably comparable.

Twenty towns of more than 5,000 inhabitants reported more births in 1928 than in 1927. Eight of these towns showed increases of 10 or more. They are as follows:

Bridgeport	33±21	Meriden	12±10
Greenwich	11±8	New London	10±8
Groton	10±5	Stratford	11±7
Hartford	23±23	Waterbury	12±17

With the possible exception of Groton, none of these increases is of significance as they might have arisen from mere chance fluctuation.

Sixty-eight stillbirths were reported, making a total number of births of 2230. Therefore stillbirths appeared at the rate of 30.5 per 1,000 total births. Last year there were 91 stillbirths among a total of 2409 births, or at a rate of 37.8 per 1,000 births. The rates are better expressed with their chance dispersions or the rate for 1927 is 30.5 ±3.7 and for 1926 it is 37.8 ±3.8. The difference in the rates is –7.3 ±5.3 or 1928 is 7.3 ±5.3 below 1927. This decrease is one which might have occurred from the operation of pure chance alone.

The sexes of the stillbirths were: males 37, females 31 or 119 males to 100 females. This is rather a low sex ratio as it may be 140 to 100.

Deaths

A very favorable month was experienced, there being 1601 deaths, 41 less than a year ago when 1642 were recorded. The rate of 11.9 is very low for a month when, in general, the death rate is high. In the last six years the rate for 1928 is the lowest to appear.

A survey of the more important causes of deaths and a comparison of 1928 with 1927 will give the following table:

Cause of Death	1928	1927	Increase	Decrease
Diseases of the heart	231±15	278±17	....	47±23
Epidemic encephalitis	4±2	1±1	3±2	....
Pneumonia, undefined	3±2	0	3±2	....
Typhoid Fever	3±2	2±1	1±2	....
Measles	4±2	2±1	2±2	....
Scarlet fever	1±1	2±1	....	1±2
Whooping cough	3±2	8±3	....	5±3
Diphtheria	11±3	8±3	3±4	....
Influenza	39±6	55±7	....	16±10
Tuberculosis, pulmonary	82±9	91±10	....	9±13
Tuberculosis, other forms	5±2	9±3	....	4±4
Cancer	156±12	157±13	....	1±18
Cerebrospinal meningitis	1±1	1±1	....	....
Poliomyelitis	2±1	0	2±1	....
Lobar pneumonia	115±11	113±11	2±15	....
Broncho pneumonia	75±9	66±8	9±12	....
Diarrhea and enteritis under 2	13±4	16±4	....	3±5
Puerperal diseases	13±4	18±4	....	5±6
Accident	97±10	83±9	14±14	....
Suicides	24±5	12±3	12±6	....
Homicide	2±1	4±2	....	2±2
Other causes	717±27	716±27	1±38	....
Totals	1601±40	1642±41	52	93

Of the increases the increase for suicides seems to be definite. The decrease for diseases of the heart is also definite. This is a decrease which does not usually appear, and to have it of significance is very encouraging. There would be far fewer deaths from heart disease if the public was entirely educated as to the benefits of the periodic health examination.

An increase in accidental deaths will be noted. The increase is 14. It is accompanied by a standard deviation of 14, indicating that the increase is of no more than passing interest—it might occur from chance alone. Analysing further, however, will show: 1928, deaths from automobile accidents, 37; 1927 deaths automobile accidents, 20. Increase 17. This increase is **not** one which could have arisen from mere chance.

The marriages are especially few, the rate being only 4.6 marriages per 1,000 of the population. This is lower than any rate which has appeared for the last six years.

FOR SIX YEARS—JANUARY, 1928

CONNECTICUT	1923	1924	1925	1926	1927	1928
BIRTHS	2594	2689	2625	2570	2318	2162
Birth Rate	21.1	21.5	20.6	19.8	17.5	16.1
DEATHS	1833	1556	1687	1674	1642	1601
Death Rate	14.9	12.4	13.2	12.9	12.4	11.9
MARRIAGES	777	820	785	776	742	621
Marriage Rate	6.3	6.5	6.2	6.0	5.6	4.6
COMMUNICABLE DIS.* DEATHS	257	159	182	199	169	146
Per Cent to Total Deaths	14.0	10.2	10.9	11.9	10.3	9.1
DEATHS UNDER 1 YEAR	238	220	233	196	169	163
Rate Per 1,000 Births	92.7	83.1	93.9	81.4	70.5	68.4

*Includes Typhoid Fever, Measles, Scarlet Fever, Whooping Cough, Diphtheria, Tuberculosis Pulmonary, Cerebrospinal Meningitis, Poliomyelitis, Influenza.

Statistics
January, 1928

	Population Est. as of July 1, 1927 Based on U. S. Census	TOTALS				DEATH RATES			AGE GROUPS		
		Births	Stillbirths	Marriages	Deaths	All Causes (per 1,000 population)	Tuberculosis (per 1,000 population)	Children under 1 year (per 1,000 births)	Under 1 year	1 to 5 years	65 years and over
State of Connecticut	1,613,874	2162	68	621	1601	11.9	0.6	68.4	163	31	628
Ansonia	19,805	25	1	6	18	10.9	0.6	208.7	4	.....	7
Branford	7,133	13	.....	5	15	25.2	1.7	122.4	1	.....	6
Bridgeport	179,163	232	11	45	136	9.1	0.7	54.9	14	4	41
Bristol	26,820	48	2	8	19	8.5	1.3	71.0	4	1	2
Danbury	21,931	38	.....	8	37	20.2	1.6	45.8	2	3	11
Derby	13,194	19	.....	.....	13	11.8	.....	.....	.....	.....	7
East Hartford	14,311	19	.....	1	12	10.1	1.7	80.0	1	.....	3
East Haven	5,030	12	.....	3	9	21.5	2.4	.....	.....	.....	6
Enfield	13,445	16	.....	7	8	7.1	.....	48.8	1	.....	.....
Fairfield	16,091	15	.....	4	7	5.2	.....	89.5	1	.....	5
Glastonbury	6,288	9	.....	.....	2	3.8	.....	166.6	1	.....	.....
Greenwich	26,956	39	1	47	24	10.7	0.5	71.3	3	.....	6
Groton	11,607	19	.....	7	14	14.5	.....	109.1	1	.....	11
Hamden	11,002	21	1	3	14	15.3	.....	140.3	2	.....	6
Hartford	172,288	284	10	77	162	11.3	0.6	58.0	20	3	45
Killingly	9,517	14	.....	5	11	13.9	.....	68.6	1	.....	6
Manchester	22,478	27	.....	5	17	9.1	.....	.....	.....	.....	10
Meriden	37,085	59	4	14	43	13.9	1.0	34.2	2	.....	20
Middletown	23,000	1	3	6	25	13.0	0.5	62.3	3	1	9
Milford	15,273	8	.....	4	10	7.9	.....	.....	.....	.....	8
Naugatuck	17,069	9	.....	13	26	18.3	.....	100.0	1	.....	7
New Britain	72,654	109	7	26	49	8.1	0.8	76.5	10	1	12
New Haven	187,705	234	7	84	171	10.9	0.5	35.6	11	5	70
New London	30,770	41	.....	13	32	12.5	0.4	30.2	2	1	15
Norwalk	30,537	44	2	17	52	20.4	0.8	51.9	3	.....	31
Norwich	30,762	45	2	19	45	17.6	0.8	160.4	10	.....	17
Plainfield	8,909	7	.....	3	13	17.5	.....	186.0	2	.....	7
Plainville	5,191	5	.....	1	4	9.2	.....	196.7	1	.....	1
Plymouth	6,554	8	.....	.....	6	10.9	1.8	296.3	2	.....	1
Putnam	9,334	10	1	11	8	10.3	.....	.....	.....	.....	4
Seymour	8,526	3	.....	1	2	4.2	1.4	.....	.....	.....	.....
Shelton	12,000	9	.....	3	5	5.0	.....	82.2	1	1	1
Southington	10,123	14	.....	.....	9	10.7	.....	.....	.....	.....	4
Stafford	5,490	11	.....	1	7	15.3	.....	.....	.....	.....	3
Stamford	49,923	91	3	25	49	11.8	0.5	42.7	4	1	17
Stonington	11,152	15	.....	4	9	9.7	.....	.....	.....	1	4
Stratford	17,451	27	.....	1	12	8.3	.....	70.1	1	.....	6
Thompson	5,252	8	.....	3	3	6.9	.....	.....	.....	.....	2
Torrington	25,453	33	.....	11	27	12.7	0.5	24.6	1	3	11
Vernon	8,751	8	.....	2	9	12.3	1.4	151.8	2	.....	4
Wallingford	12,747	13	.....	.....	18	16.9	1.9	108.1	1	.....	11
Waterbury	107,908	150	7	37	104	11.6	0.7	53.4	10	2	37
Watertown	7,732	13	1	4	4	6.2	.....	.....	.....	.....	.....
West Hartford	12,763	22	1	2	21	19.7	.....	497.0	7	.....	6
West Haven	19,384	27	.....	9	24	14.9	.....	97.8	3	1	12
Westport	5,862	3	.....	1	5	10.2	.....	.....	.....	.....	4
Wethersfield	5,387	6	.....	3	6	13.4	.....	.....	.....	.....	1
Winchester	9,144	9	1	.....	11	14.4	.....	61.5	1	.....	6
Windham	14,509	20	.....	8	15	12.4	0.8	161.6	4	.....	4
Windsor	6,880	9	.....	1	6	10.5	.....	210.5	1	.....	4
Towns under 5,000	205,585	222	3	63	236	13.8	0.6	124.9	24	3	112
Other States		19	.....	.....	17	.....	.....	.....	.....	.....	5

DEATHS FROM IMPORTANT CAUSES

Diseases of the Heart	Encephalitis Epidemic	Pneumonia Undefined	Typhoid Fever	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Influenza	Tuberculosis-Pulmonary	Tuberculosis Other forms	Cancer	Meningitis-Cerebrospinal	Poliomyelitis	Pneumonia—Lobar	Pneumonia—Broncho	Diarrhea-Enteritis Under 2	Puerperal Diseases	Accident	Suicide	Homicide	Institutional Deaths	Non-resident Deaths
231	4	3	3	4	1	3	11	39	82	5	156	1	2	115	75	13	13	97	24	2	578	
5									1					1		1					5	
3								1	1		2			2					1		7	
17						1	4	2	11		15			5	1	3	1	13	4		46	
3									3		1				1						5	
6									3		1			1	1			6	1		13	
1								1			2							2			3	
1									2		1				2						4	
								1	1		2			1	1						4	
2														1								
1											2			1							1	
																					2	
1								1	1		4				1			3	1		10	
1																		2	1		5	
4										1	1			1				1			4	
19			1				1	3	9	1	14			17	9	1	1	13	4	1	87	
											3				1		1				3	
1											2			2				2			4	
4									3		3			4	2			2			23	
10									1		1			2	2			3			10	
2								1			1				2				1		4	
4								3			3			6	1			1			3	
7	1								5		3		1	3	1	1					15	
30				4		2	1	5	9		17			17	5		1	11	1		75	
7									1	1	3			5	2		1				15	
4							1	3	2		9			2	2			4	2	1	15	
5		1					1		2		6			2	4	1	1	6			13	
3											1				1	1						
											1										1	
1									1				1		2						1	
1								1			2							1			3	
									1												1	
								1			1				1						1	
1											1			1	1		1		1		4	
3																		2			2	
6								2	2		4	1		2	2			3	1		17	
3									2						1							
											1			2	2						4	
											2											
3					1		1	1	1		4			4	2				1		9	
									1						2						4	
4									2		1			1							5	
9	2	1	2					4	6		11			4	5		1	7	2		42	
											1			1							1	
6											2			1		3		1			12	
2								1			2			4	3			2			4	
1																					2	
2		1									1							1	1		1	
3											2			1				2			4	
2								1	1										1		6	
1														3							5	
40	1						2	7	9	2	21			17	13	2	4	8	1		63	
2									1		2			1	2		1	1			10	

Laboratories

SUMMARY OF BUREAU ACTIVITIES
FEBRUARY, 1928

	DIAGNOSTIC					Examinations
	+	—	?	Unclassified	Specimens	
Typhoid	3	272	2	....	275	277
Paratyphoid A	....	277	....	....	....	277
Paratyphoid B	12	264	1	....	....	277
Diphtheria	66	1056	....	....	569	1122
Diphtheria Virulence	20	41	....	....	53	61
Vincent's Angina	6	754	....	....	1	760
Hemolytic Streptococci	41	719	....	....	....	760
Tuberculosis	9	176	....	....	185	185
Syphilis	570	2554	84	....	2421	3208
Gonorrhoea	35	108	....	....	143	143
Pneumonia	3	1	....	....	4	4
Rabies	5	4	....	....	9	9
Special Specimens	4	10	....	84	16	98
					3675	7181
CHEMICAL AND BACTERIOLOGICAL						
Milk samples					275	275
Cream samples					1	1
Water samples					206	206
Sewage samples					14	14
Sea Food samples					5	5
Clinical thermometers					263	263
Totals					4439	7945
Total laboratory procedures						15866

Useful Field Test for Examining Milk

In an outbreak of scarlet fever along a milk route a recently suggested method was tried out for locating cows with udder infection. The microbiologist took to the stable a solution of bromcresol-purple, and clean bottles to collect milk from each quarter of the udders. The first "stream" or two of milk was discarded and then two or three streams milked into a bottle and a few drops of indicator added. Udder infection turns the color of the indicator from dull brownish purple to bright purple.

Samples were then collected from any quarter showing a color change and one composite sample from the cows whose milk reacted normally for laboratory tests. Much work which was formerly carried on entirely by laboratory tests was thus eliminated and within a few hours the suspected cows had been located and their milk removed from the supply going to consumers.

Preventable Diseases

INCIDENCE OF DISEASE FOR MONTH OF FEBRUARY, 1928

(As compared with previous years)

A comparison of the daily morbidty reports received during the month of February, 1928, with the corresponding month for the years 1923, 1924, 1925, 1926 and 1927.

	Average 1923-1927 for Feb.	Mean 1923-1927 for Feb.	1923	1924	1925	1926	1927	1928
Cerebrospinal Meningitis ..	4	2	9	2	2	1	6	4
Diphtheria	187	191	191	229	202	183	128	138
Encephalitis Epidemic	10	4	34	2	4	4	6	5
Measles	1132	829	1575	829	259	2591	408	1267
Poliomyelitis	1	1	1	2	1	1	1	1
Scarlet Fever	520	437	362	746	725	331	437	390
Smallpox	3	....	10	7	....	....	....	16
Typhoid Fever	8	5	5	5	13	11	4	7
Tuberculosis Pulmonary ..	111	104	101	133	104	103	116	135
Whooping Cough	230	197	303	188	197	281	179	642

A comparison of the morbidity of these diseases for the two preceding months, December 1927 and January 1928, with the February 1928 record is as follows:

	Dec. 1927	Jan. 1928	Feb. 1928
Cerebrospinal Meningitis	1	2	4
Diphtheria	196	177	138
Encephalitis Epidemic	1	3	5
Measles	193	606	1267
Poliomyelitis	5	3	1
Scarlet Fever	302	496	390
Smallpox	....	125	16
Typhoid Fever	6	5	7
Tuberculosis Pulmonary	96	123	135
Whooping Cough	470	516	642

Cases of Certain Other Reportable Diseases

Chickenpox	415	Septic Sore Throat	6
Encephalitis Epidemic	5	Smallpox	16
Favus	2	Gonorrhea	130
German Measles	9	Syphilis	155
Influenza	32	Ophthalmia Neonatorum	1
Mumps	541		
Paratyphoid Fever	5	Total	1317

Cases of Occupational Diseases

Oil Dematitis	4	Toxic Dermatitis	5
		Total	9

Cases of Certain Reportable Diseases

February, 1928	Population Est. as of July 1, 1927	Typhoid Fever	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Meningitis Cerebrospinal	Poliomyelitis	Pulmonary Tuberculosis	Other Forms Tuberculosis	Pneumonia Lobar	Broncho-Pneumonia	Other Com. Diseases
State Total	**1,613,874**	**7**	**1267**	**390**	**642**	**138**	**4**	**1**	**135**	**25**	**233**	**139**	**1317**
NEW HAVEN CO.	**483,603**	**2**	**1138**	**52**	**255**	**22**	**1**		**47**	**19**	**55**	**24**	**346**
New Haven	187,705	2	728	15	117	5	1		31	17	22	10	245
Waterbury	107,908		7	5	3	8			7	1	13	2	40
Meriden (city and town)	37,085		131	9	61				2		7	8	7
Ansonia	19,805								4				1
West Haven	19,334		86	5	38	3					3	3	10
Naugatuck	17,069			1							1	1	
Wallingford town and boro	12,747												
Milford	15,273					3					1		7
Derby	13,194			1							2		4
Hamden	11,002		88	3	27	2			1		3		6
Branford (town and boro)	7,133		47	6					1	1			5
Seymour	8,526								1				1
Towns under 5,000	21,792		51	7	9	1					3		20
FAIRFIELD CO.	**387,138**	**1**	**14**	**101**	**163**	**45**	**2**		**27**	**1**	**69**	**31**	**256**
Bridgeport	179,163		4	25	15	39	1		18	1	30	12	48
Stamford (city and town)	49,923		3	1	42	1			2		9	2	46
Norwalk	30,537		2	3	1				2		1	3	6
Danbury (city and town)	21,931			37					1		11	1	3
Greenwich (town and boro)	26,956		2	19	31						3	7	38
Stratford	17,451	1	1	3		3					4		4
Fairfield	16,091			3	28	1			1		2		4
Shelton	12,000			2					1		1	1	4
Westport	5,862												1
Towns under 5,000	27,224		2	8	46	1	1		2		8	5	102
HARTFORD CO.	**411,342**	**1**	**106**	**109**	**114**	**49**	**1**		**44**	**4**	**53**	**58**	**389**
Hartford	172,288	1	12	30	33	35	1		27	4	22	34	150
New Britain	72,654			22	14	2			4		9	3	85
Bristol (city and town)	26,820		1	1	8	2			9		6	1	26
Manchester	22,478		82	6	28	3					2	3	15
Enfield	13,445			4	2						2	3	8
East Hartford	14,311		5	7	1						2	1	4
Southington (town and boro)	10,123		6	4	15				2				2
West Hartford	12,763			11		1			2		1	2	28
Windsor	6,880				12						2	2	9
Glastonbury	6,288			6							2	2	1
Plainville	5,191				1	1							
Wethersfield	5,387			1		1							3
Towns under 5,000	42,714			17		4					5	7	57
NEW LONDON CO.	**116,306**	**1**	**3**	**83**	**58**	**8**			**8**		**11**	**2**	**88**
Norwich (city and town)	30,762			40	16	4			5		3	1	22
New London	30,770		1	28	31	2					3		18
Stonington (town and boro)	11,152		1										1
Groton (town and boro)	11,607	1		10	9	1					3	1	2
Towns under 5,000	32,015		1	5	2	1			3		2		45
LITCHFIELD CO.	**81,518**			**11**	**3**	**1**			**2**		**11**	**4**	**20**
Torrington (town and boro)	25,453			1					1				
Winchester (inc. Winsted)	9,144												
Plymouth	6,554					1						2	
Watertown	7,732			5	3						2		4
Towns under 5,000	32,635			5					1		9	2	16
WINDHAM CO.	**56,717**	**2**	**5**	**22**	**5**	**5**		**1**	**5**		**12**	**2**	**101**
Windham (inc. Willimantic)	14,509	1		17		1					1		6
Putnam (city and town)	9,334				2				1		2	1	16
Plainfield	8,909	1		4					1		1		2
Killingly (inc. Danielson)	9,517		4		1			1	1		2		46
Thompson	5,252		1			2			1		2		1
Towns under 5,000	9,196			1	2	2			1		4	1	30
MIDDLESEX CO.	**49,372**			**10**	**44**	**3**			**2**		**21**	**18**	**94**
Middletown (city and town)	23,000			4	24	2					17	18	69
Middletown State Hospital									2				3
Towns under 5,000	26,372			6	20	1					4		22
TOLLAND CO.	**27,878**		**1**	**2**		**5**				**1**	**1**		**24**
Vernon (inc. Rockville)	8,751					1				1			
Stafford (town and boro)	5,490												3
Towns under 5,000	13,637		1	2		4					1		21

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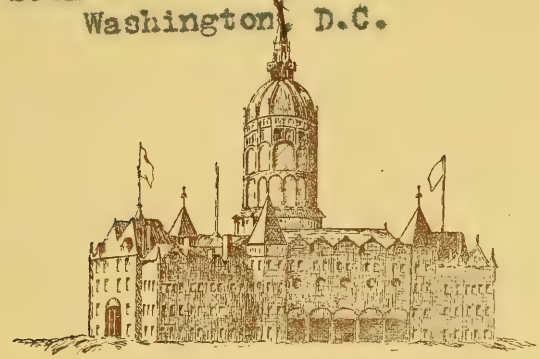

Connecticut Health Bulletin

"For a Clean State and a Healthy People"

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SPECIAL ARTICLES

The Recent Smallpox Epidemic in Connecticut

Sewage Treatment Plants in Connecticut

Approved Laboratories for Bacteriological and Milk Examinations

STANLEY H. OSBORN, M. D., C. P. H., Commissioner

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MONTHLY HEALTH BULLETIN

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THE RECENT SMALLPOX EPIDEMIC IN CONNECTICUT*

Connecticut had no smallpox cases for over a year until one was reported to the State Department of Health during the last few hours of the last day of the year 1927. This was a suspected case of smallpox reported by the health officer of Cromwell. It proved to be the first case of smallpox reported in the epidemic which has now totaled 145 cases.

Apparently the epidemic began through an unknown smallpox case that lived or stayed a short time in Middletown or adjoining towns for the disease was centered in that city, Portland, Cromwell and East Hampton.

The cases of smallpox spread to 14 towns and cities in Connecticut and two communities in Massachusetts. The disease is now practically eliminated from the state and the scattering cases the past few weeks have been among persons who frankly refused to be vaccinated.

Prompt Action By Health Officials

When we consider that one unknown case of smallpox in December caused 125 cases of smallpox in January, it can easily be seen that something unusual had to be done to prevent the 125 cases in January from causing several hundred cases in February. The physicians of Middlesex County, recognizing the menace of smallpox and by virtue of their training knowing of its danger and rapidity of its spread, met in Middletown within 24 hours of the recognition of the first case, to discuss the measures for eliminating the smallpox outbreak that they felt was coming.

These fears were well grounded for during the first week in January, 26 cases were reported and during the second week there were 53 cases. The second week proved to be the heighth of the epidemic for, as the people were immunized by vaccination, this immunity becoming effective ten days after vaccination, the number of persons who could be infected were rapidly diminished.

The Disease Spread Rapidly

Thus during the first week in February there were reported six cases, during the last week in February two cases, and du-

*Radio Talk Broadcast over W.T.I.C., March 22, 1928, by S. H. Osborn, M. D.

ring March four cases of smallpox were reported. Of the last 20 cases reported in the epidemic, one was 69 years of age and another 71 years of age, both having been advised by friends that they were too old to have smallpox. One patient was a four weeks old baby. Four of the remaining 17 cases were antivaccinationists or persons who refused to be protected against smallpox because they did not believe in vaccination. Eleven persons had never been vaccinated. Two persons had previously been vaccinated 12 and 22 years ago, respectively. One person now ill with smallpox did not want to be inconvenienced with vaccination as he felt he would be, but now has the disease with all its inconvenience.

From time to time a case of smallpox was discovered on the streets of Middletown, a case was found in New Haven who had attended three theatres in as many days and new cases were reported from the adjoining towns of Cromwell, East Hampton and Portland.

It meant long and arduous hours for the health officers and others who were assisting in fighting the epidemic for the battle front of the epidemic spread to new towns and cities very rapidly.

Epidemic Controlled By Vaccination

The manner in which this recent smallpox epidemic was brought under control is another demonstration of the efficiency of immunizing a community by vaccination. In addition to the medical men of Middletown and Middlesex County the merchants, manufacturers and other business men of Middletown, and Wesleyan University, recognizing the probable economic loss, assisted the health authorities in checking the epidemic by urging vaccination, for when smallpox is present in any town, people avoid going to that locality. The city school authorities adopted the state law, thereby ensuring the protection of the school children of Middletown against the plague that was upon them, The City Council of Middletown took action whereby through a committee consisting of the Mayor, first selectman and the health officer were given power to act in dealing with smallpox questions that might arise.

The police department of the city rendered excellent work in assisting the health officer in the quarantining of the known smallpox cases and the isolation of unvaccinated persons who had been in contact with smallpox cases.

All the physicians and health officers in the state were notified to be on the watch for smallpox cases and they did their work well, as is shown by the fact that cases were usually recognized on the first visit of the physician as a smallpox case or suspected case.

Wholesale Distribution of Vaccine

No small task was the distribution of the vaccine to the different towns and cities by bus, mail and special messenger so that there would be no delay in the vaccination program through lack of material. In one case the railroad cooperated to the extent of delaying an express for several minutes in order that a shipment of vaccine might arrive in Connecticut promptly.

It is due to the fact that certain persons do not believe in vaccination that smallpox cases have continued to be reported, for these latest cases are persons who would not be vaccinated, with the result that their community is still reported as having smallpox.

Medical men and public health workers know that vaccination immunizes persons against smallpox and that the adults and children who had it done aided their town or city and stopped the epidemic. It is not a question of belief, it is a fact known over a hundred yars that vaccination protects against smallpox.

The cost of the epidemic in dollars and cents cannot perhaps be accurately measured. We know it amounted to tens of thousands of dollars, the exact amount will never be known; it can only be estimated.

As a result of the epidemic, many cities and towns adopted the state law through their boards of education whereby all the children going to the public schools will be protected against smallpox in the future by being immunized by vaccination.

A study of the epidemic has revealed what previous studies have shown, that any city or town that is not protected against smallpox can have an epidemic when some person ill with smallpox visits it and is in contact with many persons.

Vaccination a Safeguard

No person had smallpox who was recently vaccinated; in fact only five cases had ever been vaccinated, one 12 years previous, one 22 years previous, and the others approximately 42, 43 and 44 years prior to their attack. In all five cases the disease was exceedingly mild.

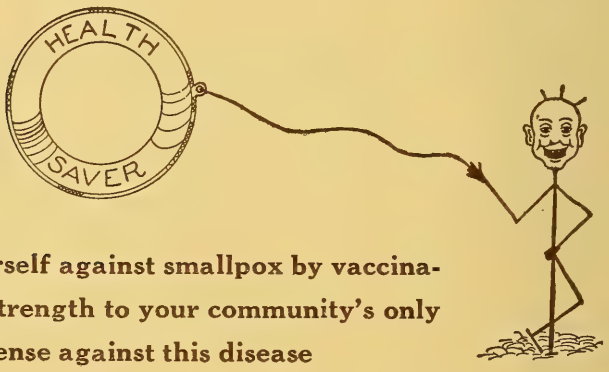
The moral to be derived from this last smallpox epidemic in Connecticut is—to save your community from an epidemic—be vaccinated— and to protect your children from smallpox—have them vaccinated. The first steps to ensure community protection is to support the board of education in your town or city in adopting the state law which allows any town to require all children going to the public schools to be protected against smallpox by vaccination.

No community should allow itself to be subjected to the ravages of smallpox because of the personal belief of one or two persons. Community interest demands protection.

Vaccination does protect persons against smallpox and as was shown in this epidemic as in others Connecticut has had. the personal belief of an individual is a poor protection against that rapidly spreading disease, smallpox.

Community welfare should mean prevention of disease. It is for the interest of every city and town to prevent disease rather than suffer from an epidemic. Prevention has always been the keyword of every board of health in Connecticut.

The State Department of Heath will be glad to mail a copy of a pamphlet "The Smallpox Peril" to anyone on request.



Protecting yourself against smallpox by vaccination is adding strength to your community's only sure line of defense against this disease

SEWAGE TREATMENT PLANTS IN CONNECTICUT

By Warren J. Scott

The wastes from sewerage systems may affect health in several ways: (1) by pollution of water or ice supplies, (2) by pollution of bathing areas, (3) by pollution of shellfish areas, (4) by exposure of sewage solids on mud flats from which bacteria might be carried, (5) by polluted flood waters flowing over areas used for agricultural purposes, and (6) by creation of nuisances productive of offensive odors and, therefore injurious to the public well-being.

Connecticut at the present day has no public water supplies drawn from streams receiving discharge from public sewerage systems. While this is extremely fortunate, this has undoubtedly retarded the amount of progress made in cleaning up our inland streams. It is brought about because it is possible to secure good water from upland streams in thinly populated areas to supply our various cities, towns and villages—mostly by gravity. The day is undoubtedly coming, however, when the growth of population will make it necessary to turn to streams receiving sewage discharge for water supply needs. Modern methods of water purification make such practice possible with perfect safety, and already circumstances have made this condition very common in other parts of the country. It is generally recognized in such cases that an upstream community must so treat its sewage as to avoid unnecessary burden upon the purification plant of a downstream water supply.

Sewage Problems Increasing

During the past year considerable agitation has been manifest among our shore communities concerning the effect upon bathing of dumping increasing amounts of untreated sewage into the waters of Long Island Sound. Thousands of Connecticut's inshore residents who flock to the beaches in the summer are also disturbed over the situation.

The Connecticut State Department of Health in 1927 closed for market purposes three shellfish areas in Greenwich, Norwalk, and New Haven, which have been used for many years but which pollution inroads have rendered dangerous. Legal proceedings have been instituted by one or two shellfish dealers against cities polluting these harbors.

Nuisance conditions are growing worse along such streams as the Naugatuck, Sebeth, Still and other rivers in the state. It has long been recognized that bathing is of questionable safety in these streams.

Joint Supervision of Stream Pollution

The history of stream pollution in the state has been concerned with many investigations of remedial measures. In 1925, the State Water Commission was created by the legislature and embodied with extensive powers to order stream pollution abated. This Commission does not exercise supervision over public water supplies, with which the State Department of Health is entrusted by law. The Commission is now proceeding on its work of promoting treatment of sewage, or industrial wastes as it relates to the public welfare. The interests of this Commission include the usableness of water for industrial purposes, destruction of fish life, and general reduction of the pollution load Connecticut's streams and shore waters are being called to bear. Cooperation of the State Department of Health with the State Water Commission avoids over-lapping and every effort is made to prevent duplication.

Section 2554 of the General Stautes, Revision of 1918, reads as follows:

> "The State Department of Health may investigate all points of sewage discharge and may examine all existing or proposed public sewerage systems and refuse disposal plants, and may compel their operation in a manner which shall protect the public health, or may order their alteration, extension and replacement by other structures when necessary for the protection of public health. No public sewerage system or refuse disposal plant shall be built until the design of the same has been filed with the State Department of Health and approved by said department."

The State Department of Health is interested in all sewage conditions which affect health. The department exercises supervision over sewage treatment plants in the state and endeavors to secure the maximum amount of efficiency from existing plants. The design and construction of new plants must be approved by the department. The plans for each new plant are carefully reviewed by department engineers and changes and recommendations are frequently referred back to the designer before approval is granted. In its capacity of supervising operation, the department discovers many inherent defects in existing plants, and this information is of value in passing on new plans. The 1925 law prohibits new sources of pollution without the approval of the State Water Commission so that arrangements are made whereby plans for new plants are approved by joint agreement between the two bodies so as to avoid any conflict of action.

Results from Sewage Treatment

The objects desirable of accomplishment by sewage treatment might be segregated into (1) removal of coarse suspend-

ed solids or a relatively small proportion of total suspended solids; (2) removal of a relatively large amount of suspended solids; (3) production of an effluent which is relatively free from suspended solids and fairly stable; (4) production of an effluent which is clear, free from any noticeable amount of suspended solids, and stable; and (5) destruction of any harmful types of bacteria. The following numbered processes are usually necessary to secure the corresponding numbered objects above: (1) coarse or fine screens; (2) sedimentation tanks, (3) trickling filters or possibly contact beds, (4) sand filtration or activated sludge treatment, and (5) sterilization by chlorination.

The extent to which the various methods are developed in a particular instance depends on what it is desired to accomplish, the location possible for a treatment site, and, of course, the money available for the project. Frequently, combinations of these treatment methods are used. All of these methods of treatment are in use in various parts of Connecticut with the exception of activated sludge treatment. We are fortunate, however, in having for observation purposes a near-by neighbor employing this method, at Mamaroneck, N.Y. The table below presents a list of the municipal sewage treatment plants in Connecticut.

Municipal Sewage Treatment Plants

Plant	Preliminary Treatment	Secondary Treatment
Canaan	Septic tank	None
East Portchester (Greenwich)	" "	"
Granby (small portion)	" "	"
Groton (small portion)	" "	"
Manchester	" "	"
Middletown (Mazzotta Place Plant—small portion)	" "	"
Rockville	" "	Contact Beds
Stafford Springs	" "	None
Wethersfield	" "	"
Prospect Beach (West Haven)	" "	Chlorination
Sound Beach (Greenwich)	" "	"
Ridgefield	" "	Sand Filtration
Sharon (small portion)	" "	" "
Southington	" "	" "
New Canaan	Septic tank. Excess storm flow treated only by chlorination	Sand Filtration except storm flow
Greenwich	Imhoff tank	None
Middletown (small portion—Washington St. Plant)	" "	"
Middletown (small portion—Catherine St. Plant)	" "	"
Wallingford	" "	"

Plant	Preliminary Treatment	Secondary Treatment
Watertown	Imhoff tank	Trickling Filter
Stamford	" "	Chlorination
Stratford	" "	"
West Haven	" "	"
Plainfield	" "	Sand Filtration
Lakeville	Septic tank; Imhoff tank	" "
Bridgeport	Fine Screens	None
New Britain	" "	Sand Filtration
Bristol	Sand Filtration	None
Danbury	Sand Filtration. Excess night flow treated only by chlorination	"
Danielson	Settling in shallow gravel basin	"
Litchfield	Sand Filtration	"
Meriden	" "	"
Norfolk	" "	"
Simsbury	" "	"
South Manchester	Sand Filters (not in use)	"

Types of Treatment

A few comments in regard to the various processes of treatment, with particular reference to Connecticut follow:

Screens. Coarse bar screens are very frequently employed ahead of other methods of treatment to lessen the load on the plant and avoid trouble with stoppages. The usual clear space between the bars is between ½ and 2 inches. These screens are generally cleaned by hand and the screenings disposed of by burial.

Fine screens are considered capable of removing at least ten to fifteen per cent of suspended solids and the manufacturers of the newest types of fine screens claim a much higher percentage removal. The term "fine screens" is applied to screens having a slot or mesh opening of ⅛ inch or less. The screenings are removed mechanically by brushes and are usually disposed of by burial. Bridgeport has a large Riensch-Wurl fine screening plant which has suffered somewhat in efficiency in the past from lack of attention to repairs and maintenance. The State Departmnt of Health is conducting some fairly extensive tests this spring in cooperation with the State Water Commission and the Bridgport city engineering office to determine the work being accomplished by these screens.

Sedimentation. The sedimentation tanks now in use in Connecticut consist of one story septic tanks or two story Imhoff tanks. By treatment in properly designed tanks, 50 to 75 per cent of the suspended solids can be removed. The two story tank is designed with the upper chamber serving as the sedimentation unit and the lower chamber as a digestion

chamber for the sludge passing through slots between the two chambers.

The sewage disposal project tentatively approved for the City of New Haven calls for single story sedimentation tanks with a comparatively short detention period for the sewage, and mechanical means for removing sludge from the tanks.

The effluent from sewage tanks still contains considerable amounts of suspended solids, is unstable (i.e., further decomposition of the effluent will take place, so that sufficient dilution or further treatment is necessary to avoid objectionable odors), and may contain disease germs. Chlorination of the effluent may be employed to destroy harmful bacteria. Many Connecticut plants discharge the tank effluent on sand filters to stabilize it and remove most of the remaining suspended solids before discharge into water courses.

One of the problems confronting the State Department of Health in connection with supervision of plants employing tank treatment is to secure frequent removal of sludge or of scum. Many old septic tanks were built with concrete covers and infrequently spaced manholes for cleaning. It is now required that new septic tanks be constructed with ample facilities for scum removal as well as for removal of the heavier sludge. Some old roofs have been torn out and replaced with plank covers. Two recently designed tanks were built with facilities for floating off scum. Another tank has been designed with a suppressed roof to keep the scum moist.

Where sludge is well digested, it is usually discharged to underdrained sand beds, on which it can be dried without odor. The remaining sludge can be raked up and buried. In some of the large old septic tanks, the scum and sludge have to be removed by hand and buried in shallow trenches. The Sound Beach plant in Greenwich is provided with a glass covered sludge bed to keep down odors. Some recently designed plants provide for separate tanks to digest sludge so that it can be dried more readily and with less odor. In the case of the proposed New Haven plant already mentioned, it is tentatively planned to dispose of sludge by dumping it at sea in deep water far enough removed so that bathing and shellfish areas will not be affected.

Filtration. *Trickling filters* consist of beds of broken stone, varying in different plants between ¾ and 3 inches in size, and with depths of 5 to 10 feet. In usual American practice, the effluent from tanks or fine screens is sprayed upwards through nozzles and falls on to the surface of the filter through which the sewage percolates. The nozzles discharge intermittently and the aeration and biologic action in the filters produce an effluent which is generally stable (i.e., it will not decompose further). The effluent is collected in pipes or chan-

nels below the filters. Occasionally the filters unload much of their contained solids, due presumably to biologic changes in the body of the filter. For this reason, sedimentation of the filter effluent should be provided. Only one trickling filter plant exists in Connecticut. This is located at Watertown and has just been placed in service. The plans as approved by the department call for sedimentation of the filter effluent. The secondary sedimentation unit has not yet been constructed due to lack of funds to complete the project.

Contact filters are usually beds of stone, similar to trickling filters. The action is intermittent. Sewage is allowed to flow into the body of the filter and after standing in contact with the filter material for a short time, it is drawn off. The filter then rests so as to absorb oxygen before the next dose. The one contact filter now existing in Connecticut was built a number of years ago for the City of Rockville. Tanks preceded the filter treatment. Contact filters frequently give trouble in time due to clogging, so that the filter material has to be removed and cleaned or replaced, and at Rockville, the situation was further complicated by industrial wastes. In a short time, the pores of the filters became completely clogged so that the filters are now useless and the city is considering changes in the method of treatment.

Sand filters consist of beds of sand about 3 feet in thickness. The sand is laid over a shallow layer of gravel in which are underdrain pipes to take off the effluent to some watercourse. Sewage is applied to the surface of the filters. Sand filtration, which is impractical for many sections of the country, has met with much favor in Connecticut and other parts of New England. Local sand is often available to cheapen the cost, as well as ample areas on which to build the filters. For large cities, however, the extent of area necessary is a drawback. In some cases, areas where the sand is already in place have been employed. Sand filters produce an excellent effluent which will not decompose and they remove a very large percentage of bacteria. It is essential for the best results that intermittent dosing of filters be practised so as to allow the filters to absorb oxygen and digest the organic matter. This intermittent action is secured usually by siphons. In the case of two of the largest plants in the state, at Meriden and Bristol, sewage is run on to one bed until flooded. Most of the filter beds at Meriden are natural sandy areas in place without underdrains. Sewage is simply discharged on the sand, and no evidence of the sewage appears except for some small springs near the plant. These two cities provide no sedimentation ahead of the filters although it is usually considered desirable to do this, so as to lessen the load on the filters. All new plants approved by the department provide for preliminary treatment.

The principal trouble with the sand filtration plants in Connecticut has been that they have frequently not been enlarged to take care of increased flow. The result has been, in some cases, that the filters have become hopelessly inadequate. Where such overloading is due to sewer leakage in wet weather, it is often better to provide an overflow, at least temporarily, for a diluted tank effluent, than to attempt to make the filter plant shoulder a burden which is entirely too great and which will result in deterioration of a filter unit that is capable of satisfactorily handling dry weather flow. Some filters have been constructed with a poor quality of sand which has given trouble.

Failure to attend to siphons, clogging of underdrains, uneven distribution of the sewage on the filters, and inattention to cleaning of the bed surfaces all are conditions which frequently are found by the department to need remedying.

Chlorination. Chlorination of sewage is employed in Connecticut principally for protection of bathing beaches along the shore. A number of beaches are so located that their waters are affected to some extent by increasing amounts of sewage, although they may have been used for many years without noticeable ill effects.

In such cases, chlorination may be employed to destroy harmful bacteria in the sewage. Chlorination of raw sewage is not used because of the large amounts of chlorine that would be necessary and the doubt as to whether or not large sewage particles would be penetrated by the chlorine. This department has carried out extensive experiments at the Bridgeport fine screening plant and found that satisfactory results could be secured by a dosage of 10 to 15 parts per million of chlorine (83 to 125 lbs. per million gallons) and a ten minute period of contact between the chlorine and the sewage, under the conditions then existing. At Stratford and Stamford, where Imhoff tanks are followed by chlorination, the department found that at the time of the last tests, 3 parts per million were effective for Stratford and 6.6 parts per million for Stamford where the sewage is about twice the strength of that of Stratford.

Chlorination as a first-line defence against sewage contamination is open to the objection that the department's experience has shown it to be very difficult to secure continuous operation. The machines require careful attention and can be easily by-passed by the operator. Very careful supervision is necessary if absolute dependence is placed upon chlorination. This is a decided objection to the employment of chlorination for safe-guarding near-by shellfish areas. Where chlorination is regarded as an additional safe-guard against pollution of somewhat questionable bathing beaches or distant shellfish areas, it has a distinct field of usefulness. Chlorinated sewage

tank effluents are not stable and may cause a nuisance when discharged into a watercourse without sufficient dilution. Where a stable effluent is needed, filtration or activated sludge treatment are frequently employed, followed by chlorination to destroy disease bacteria. Occasionally to improve the operation of tanks or filters by reducing odors or for other reasons, chlorine is also applied ahead of these units.

Activated Sludge Treatment. In this process activated sludge is mixed with sewage entering aerating tanks. The sludge is activated by aerating the sewage sufficiently to allow the particles to become coated with growths of oxidizing bacteria and other organisms. The mixture of sewage and activated sludge is aerated in the aerating tanks for several hours. In these tanks, parts of the sewage become attached to the activated sludge particles and dissolved organic matter is oxidized. The sludge is then separated by sedimentation and a portion of it is returned to be mixed with the new incoming sewage. The effluent is comparable to a good sand filter effluent—clear and non-putrescible.

There are now, as already stated, no plants in Connecticut of this type. Such plants are costly to maintain and require more skilled operation than is necessary in some other types of plants. The number of installations elsewhere, however, is growing and two of the largest sewage treatment plants in the country, at Chicago and Milwaukee, are employing this process.

Summary

On the whole, conditions in the field of sewage disposal in Connecticut appear to be on the way to decided improvement. Surveys of the State Department of Health ,denoting pollution of certain bathing and shellfish areas have awakened consideration. Objections to nuisance conditions are increasing. The State Water Commission's recent activities have aroused much interest among cities and manufacturers. Many cities are undertaking or have undertaken surveys to give them definite information as to the steps necessary to provide treatment of their wastes. One or two communities are preparing to go ahead with the work. The State Department of Health has cooperated so far as possible in furnishing engineering advice and in the past two or three years has reviewed and approved a considerable number of plans for new plants of public and semi-public nature.

The department is now engaged in extensive surveys of the individual public sewage treatment plants in order that maximum efficiency can be obtained from existing plants and definite programmes inaugurated for improvements where necessary. Emergency by-passes, or means of passing sewage around a plant without treatment, are being sealed and the

plant operators advised to notify the State Department of Health if by-passing becomes necessary. Brief visits are made to the various plants as frequently as possible so as to check up on operating details. Composite samples of raw and treated sewage are collected occasionally from different plants and are analyzed by the department's laboratories, equipped since 1927 to handle this work.

For many years it has been recognized that under certain conditions of ample dilution, streams or tidal waters can be used for disposal of untreated sewage without direct adverse effect upon the public welfare and at a great economic saving. There is no question, however, but that this manner of sewage disposal has been much abused in Connecticut. A clean environment has a direct effect upon health and a great psychological effect upon us all. The time does not seem to be far distant when the public will demand higher standards for the waters of the state than can be secured by the process of dumping raw sewage into them.

State Department of Health Leaflets pertaining to Sewage Disposal in Rural Districts are available. These may be obtained on request.

APPROVED DIAGNOSTIC LABORATORIES FOR 1928

Certificates for diagnostic purposes have been issued for 1928 to the laboratories approved by the State Department of Health under Regulation 40 of the Sanitary Code. Hartford heads the list with seven approved laboratories in addition to being the city where the State Department of Health Laboratories are located. New Haven, Middletown, Norwich, South Manchester and Stamford each have two; no other city in the state has more than one at the present time.

The Sanitary Code requires that all bacteriological laboratories in the state must register annually with the State Department of Health. During the year a representative of the department has visited all the approved laboratories and practically every other laboratory doing bacteriological work in the state to determine whether their equipment, their personnel and the work they are carrying out are of satisfactory quality.

Application blanks for approval of a public health laboratory are filled out and signed by the person in charge of the laboratory and give somewhat detailed information regarding the education and experience of the person in charge with special attention to graduate courses and practical experience in public health-bacteriology, as well as the qualifications of the other laboratory workers and information regarding the location, size and lighting of the laboratory rooms and the number and kinds of pieces of standard laboratory equipment.

Before the laboratory is approved an agreement is entered into of conditions to be observed and methods to be followed for making examinations as an approved laboratory. Approval is based upon competent supervision and adequate personnel for the work undertaken; adequate housing and satisfactory equipment; methods used, those officially sanctioned by the American Public Health Association where methods have been published; agreement on the part of the person in charge that no laboratory methods or procedures will be used that fail to meet the approval of the department and that the State Department of Health be informed when changes in technique or staff are made.

On the next page is given a list of approved laboratories, their location and name and title of the person under whose direction they have been approved:

Name of Laboratory	Location
City Department of Health Laboratory Kathryn Tirrell, B. S., Director	Bridgeport
Bristol Hospital Laboratory Mabel E. Curtiss, M. D., Director	Bristol
Griffin Hospital Laboratory C. J. Bartlett, M. D., Director	Derby
Greenwich Hospital Laboratory Louise D. Larimore, M. D., Pathologist	Greenwich
Laboratory of Dr. Chas. T. Beach Chas. T. Beach, M. D., Director	Hartford
The Hall-Wilson Laboratory of the Hartford Hospital Wilmar M. Allen, M. D., Pathologist and Bacteriologist	Hartford
Travelers Insurance Company Laboratory Under the Direction of Dept. of Medicine and Hygiene	Hartford
Trinity College Bacteriological Laboratory H. C. Swan, M. D., Professor of Bacteriology	Hartford
City Department of Health Laboratory Katherine Marden, B. S., Director	Hartford
Newlands Sanitary Laboratory James A. Newlands, B. S., State Chemist	Hartford
St. Francis Hospital Laboratory Louis Pease Hastings, B. Sc., M. D., Director	Hartford
The Lucy A. Peck Pathological Lab. of the Meriden Hospital C. J. Bartlett, M. D., Pathologist	Meriden
Laboratory of Connecticut State Hospital for Insane William P. Gray, Assistant Pathologist	Middletown
City Department of Health & Middlesex Hospital Laboratories Jessie W. Fisher, M. D., Director	Middletown
City Department of Health Laboratory Chester Bowers, A. B., Bacteriologist	New Britain
Grace Hospital Laboratory C. J. Bartlett, M. D., Director	New Haven
City Department of Health Laboratory Patrick E. Bransfield, B. A., Director	New Haven
Laboratory of Lawrence and Memorial Associated Hospitals Alfred Labensky, M. D., Director	New London
W. W. Backus Hospital Laboratory John A. Ferguson, M. D., Director	Norwich
Laboratory of Norwich State Hospital for Insane John A. Ferguson, M. D., Pathologist	Norwich
Manchester Memorial Hospital Laboratory Ralph E. Kendall, M. D., Pathologist	So. Manchester
Laboratory of Cheney Brothers R. P. Knapp, M. D., Medical Director	So. Manchester
Stamford Hospital Laboratory Bruce S. Weaver, M. D., Pathologist	Stamford
City Department of Health Laboratory R. D. Fear, M. D., City Health Officer	Stamford
Charlotte Hungerford Hospital Laboratory C. J. Bartlett, M. D., Pathologist	Torrington

LABORATORIES APPROVED FOR BACTERIOLOGICAL MILK EXAMINATIONS

Legislation was enacted by the 1925 General Assembly that required any laboratory making bacteriological examinations of milk and cream to be certified by the State Department of Health as an approved laboratory for milk examination, if the results of any test are to be used in any way affecting the milk producer or dealer or if the results are to be published. Since practically all laboratory examinations of milk or cream that are made either in health department laboratories or in laboratories operated in milk plants for the convenience of the owner, are used in some way affecting the public or the producer of the milk, this legislation applies to nearly all laboratories in the state doing bacteriological milk examinations.

Inspection requirements for laboratories to be approved for bacteriological milk and cream examinations are similar to those for laboratories operating under the Sanitary Code: adequate housing; the equipment in good order as specified in the methods of the American Public Health Association; the operation of the laboratory under a properly qualified person holding a license issued by the State Dairy and Food Commissioner for bacteriological testing of milk and cream; all examinations made strictly in adherence to the Standard Methods. It is desirable that the examinations be actually carried out by persons holding licenses.

The laboratories for which 1928 certificates have been issued are listed below together with their location and the name and title of the person under whose supervision they have been approved.

Name of Laboratory	Location
Bridgeport Department of Health Laboratory Kathryn Tirrell, A. B., Director	Bridgeport
Laboratory of Mitchell Dairy Company Carl A. Brandt, Bacteriologist	Bridgeport
Brock-Hall Dairy Company Laboratory Hazel B. Gillespie, B. S., Director	Hamden
Hartford Department of Health Laboratory Katherine Marden, B. S., Director	Hartford
Newlands Sanitary Laboratory James A. Newlands, B. S., State Chemist, Director	Hartford
Laboratory of Bryant and Chapman Company Lewellyn S. Dibble, Chemist and Bacteriologist	Hartford
City Department of Health and Middlesex Hospital Laboratories Jessie W. Fisher, M. D., Director	Middletown
New Britain Department of Health Laboratory Chester S. Bowers, A. B., Bacteriologist	New Britain
New Haven Department of Health Laboratory P. E. Bransfield, B. A., Director	New Haven
Waterbury Department of Health Laboratory Antonina DiNapoli, B. Ph., Bacteriologist	Waterbury

NEWS NOTES FROM THE FIELD

Physicians Licensed Since January

Bridgeport, Uvitsky, Irving Harry, 117 Oak Street.
Garbelnick, David Abraham, 1102 East Main Street
Stevens, Edwin Dearborn, 190 Hazelwood Avenue
Canaan, Adam, Forbes Sampson, Box 83
Greenwich, Tiebout, Harry M., 217 Milbank Avenue
Hartford, Guptil, Plimpton, Hartford Hospital
Rider, Ernest Bascombe, 716 Farmington Avenue
Speight, Harold Edmond, 370 Collins Street
Meriden, Campell, Sherburne, 34 Monroe Street.
Stamford Simon, Louis Goodwin, 33 Sherman Street.
Keddy, Russell Alfred, Stamford Hospital.
West Hartford, Hastings, Louis Pease, 28 So. Quaker Lane

Health Officers Appointed Since January

William F. Wild, M. D., has been appointed health officer of Bridgeport, to succeed Dr. William Hall Coon.

New Haven County Health Officer, J. Frederick Baker, Esq. has appointed Dr. David H. Bluestone health officer of Beacon Falls to succeed the late Charles D. Roberts.

Litchfield County Health Officer, William H. Bierce, Esq. has announced that Dr. John R. Lee will act as health officer of Barkhamsted during the absence of Mr. Case; he has also appointed Mr. Geo. E. Frink of Falls Village, health officer of the town of Canaan to fill the vacancy caused by the death of Bernard F. Smith.

Hartford County Health Officer, Daniel A. Markham, Esq. has announced that Dr. Joseph A. Coogan will act as health officer of East Granby during the temporary absence of Mr. Frank Dibble.

Sanitary Engineering

Clinton The beginning of this month marks the inauguration of chlorination of the water supply of the Guilford Division of the Guilford-Chester Water Company, serving the towns of Guilford, Madison, Clinton, Westbrook and part of Old Saybrook. The equipment consists of duplicate chlorinators with injectors and hydraulic pumps, and the chlorine feed is automatically controlled by a new Venturi water installation. This should provide an excellent additional safeguard for this supply.

Norfolk The department has just approved plans for the construction of a new municipal sewage treatment plant for Norfolk, located on the Blackberry River. The plant will consist of coarse bar screens, sedimentation tanks, sludge beds, siphon chamber and six intermittent sand filter units. The project will now go to the voters for necessary authorization for funds.. There seems to be no question of its success and it should do much to improve conditions on this river.

Laboratories

Many visitors have been received at the Bureau of Laboratories during the last two months. Among these have been

Dr. W. L. Higgins, Health Officer of Coventry, who was the Representative Chairman of the Public Health Committee in the 1927 State Legislature; Dr. A. H. Kranz in charge of medical work at Connecticut State Prison; Miss Kathryn R. Tirrell, Director of the City Health Department Laboratory, Bridgeport; Miss Doris Langdon, bacteriologist in Cheney Brothers Laboratory, South Manchester; Mr. E. K. Hughes, from the laboratory of the Gaylord Farm Sanatorium in Wallingford.

Mr. Dawson, Inspector of Standards for the Commonwealth of Massachusetts, visited the laboratories recently in connection with the examination of clinical thermometers. He and the director of the Conecticut State Department of Health Laboratories were delegates to a General Conference on Clinical Thermometers at the U. S. Department of Commerce in Washington on March 30. The conference was called to consider the adoption of as accurate and reliable a clinical thermometer for the entire country as Connecticut and Massachusetts have been securing since the passage of state laws licensing reliable manufacturers.

Note on Undulant Fever

A reader of the article on "Bacterium Abortus Infection in Man" in the December 1927 Monthly Bulletin has written asking if any of the blood specimens examined for presence of an agglutination reaction against a bacterium abortus antigen also were positive in the complement fixation test or the Kahn precipitation test for syphilis.

Others also may be interested in the answer to this question.

All the specimens were examined by the Wassermann test and a number of them also by the Kahn test. No positive reactions were obtained. Two specimens gave ± or doubtful Wassermann tests. One of those specimens gave a ± and the other a + Kahn test but both these Kahn reactions would be interpreted in our test as doubtful. A third specimen was received at the Laboratories with the information that in a previous examination it had shown a doubtful Wassermann test, but apparently that test was made in some other laboratory.

Vital Statistics

MONTH OF FEBRUARY

Totals for the first two months of the year, 1926, 1927, 1928

Year	Births	Birth Rate*	Marriages	Mar. Rate*	Deaths	Death Rate*
1926	4815	18.5±.1	1511	5.8±.02	3194	12.3±.1
1927	4583	17.3±.1	1529	5.8±.02	3052	11.5±.1
1928	4535	16.8±.1	1300	4.8±.02	3106	11.5±.1

*Per 1,000 population, annual basis.

Above is given a brief summary of the births, marriages and deaths for the first two months of the year. Certain features stand out. First is the marked decrease in the birth rate during the last three years. There is also a large decrease in the number of marriages and the corresponding marriage rate. This decrease is in part accounted for by the earlier beginning of the Lenten season. There is a continued low death rate, the actual number of deaths being somewhat greater this year than last year, the increase in population being sufficient to offset any change in the rate.

Births

Records of 2235 births were received, a decrease of 27 in comparison with the 2262 reported in 1927. The effect of even a relatively small decrease in any month has considerable effect, for when such decrease is converted to an annual basis it is multiplied twelve times. This effect is well shown in the birth rates for the two years, being 16.6 in 1928 and 17.1 in 1926.

There are 50 towns in Connecticut with populations of 5,000 or over. Of these towns, 25 reported more births in 1928 then 1927, but only 7 have increases of ten or more. These towns are:

Bridgeport	18±20	Hamden	11±7
East Hartford	18±7	New Haven	18±22
Fairfield	10±5	Norwich	35±10
		Stratford	13±7

Four of these increases may be regarded as significant of particular attention, namely those for East Hartford, Fairfield, Norwich and Stratford. In particular, Norwich showed an exceptionally large increase.

There were 72 stillbirths reported, compared with 68 reported in 1927. Of the 72 there were 39 males and 33 females, which is at the ratio of 118 males to 100 females.

Deaths

There was a slight increase in the number of deaths reported, there being 1486 this year, 76 more than the 1410 recorded in 1927. This would be in part accounted for by the extra day in the month, 1928 being Leap Year. In fact if the same proportion of deaths were preserved in 1928 as was experienced in 1927 when February had 28 days, the death rate would be 10.6, which is one tenth of a point lower than 1927. So for the moment Leap Year has thrown the record for 1928 a bit out of step. This will straighten out as the year goes on and when the relatively higher mortality of the winter months is replaced by favorable experience.

With respect to certain selected causes the comparison of 1928 with 1927 yields the following table for the month:

Cause of Death	1928	1927	Increase	Decrease
Diseases of the heart	248±16	256±16	....	8±22
Epidemic encephalitis	2±1	2±1	....	....
Pneumonia, undefined	3±2	4±1	....	1±3
Measles	3±2	4±2	....	1±3
Typhoid fever	2±1	1±1	1±2	....
Scarlet fever	1±1	0	1±1	....
Whooping cough	10±3	8±3	2±4	....
Diphtheria	18±4	9±3	9±5	....
Influenza	32±6	30±5	2±8	....
Tuberculosis, pulmonary	85±9	86±9	....	1±13
Tuberculosis, other forms	8±3	10±3	....	2±4
Cancer	132±11	119±11	13±16	....
Cerebrospinal meningitis	0	2±1	....	2±1
Poliomyelitis	1±1	1±1	....	....
Lobar pneumonia	102±10	73±9	29±13	....
Broncho pneumonia	79±9	68±8	11±12	....
Diarrhea and enteritis under 2	6±2	11±3	....	5±4
Puerperal diseases	11±3	16±4	....	5±5
Accident	72±8	79±9	....	7±12
Suicide	15±4	17±4	....	2±6
Homicide	2±1	3±2	....	1±2
Other Causes	654±26	611±25	43±36	....
	1486±39	1410±38	111	35

Examining first the increases a significant increase for diphtheria will be noted. This is a disease which is absolutely preventable, yet owing to the failure of many to make use of toxin-antitoxin it still continues to take its toll. There is also a pronounced increase in lobar pneumonia.

Of the decreases, there is none which is of mathematical moment, but it is particularly gratifying to note the decreases in diarrhea under 2 and puerperal diseases.

In order that some idea may be formed as to how the total number of deaths from a similar list of causes is running

throughout the year, the following list has been prepared for the first two months of the years 1928 and 1927:

Cause of Death	1928	1927	Increase	Decrease
Diseases of the heart	481	534	....	53
Epidemic encephalitis	6	3	3	....
Pneumonia, undefined	6	4	2	....
Typhoid fever	5	3	2	....
Measles	7	6	1	....
Scarlet fever	2	2	....	....
Whooping cough	13	16	....	3
Diphtheria	29	17	12	....
Influenza	72	85	....	13
Tuberculosis, pulmonary	167	177	....	10
Tuberculosis, other forms	13	19	....	6
Cancer	288	276	12	....
Cerebrospinal meningitis	1	3	....	2
Poliomyelitis	3	1	2	....
Lobar pneumonia	218	186	32	....
Broncho pneumonia	154	134	20	....
Diarrhea and enteritis under 2	19	27	....	8
Puerperal diseases	24	34	....	10
Accident	170	162	8	....
Suicide	39	29	10	....
Homicide	4	7	....	3
	1721	1725	104	108

Roughly half of the total mortality is accounted for in the above list. The particularly noticeable increases are for diphtheria, lobar and broncho pneumonia and suicide. Of the decreases, diseases of the heart, diarrhea under 2 and puerperal diseases are encouraging. It is proposed to continue this table throughout the year.

FOR SIX YEARS—FEBRUARY, 1928

CONNECTICUT	1923	1924	1925	1926	1927	1928
BIRTHS *Birth Rate*	2356 19.2	2484 19.8	2271 17.8	2245 17.3	2262 17.1	2235 16.6
DEATHS *Death Rate*	1837 14.9	1605 12.8	1507 11.8	1520 11.7	1410 10.7	1486 11.0
MARRIAGES *Marriage Rate*	715 5.8	836 6.7	812 6.4	735 5.7	787 6.0	668 5.0
COMMUNICABLE DIS.* DEATHS *Per Cent to Total Deaths*	334 18.2	205 12.8	178 11.8	206 13.6	141 10.0	152 10.2
DEATHS UNDER 1 YEAR *Rate Per 1,000 Births*	210 81.8	218 82.3	190 76.5	186 77.3	155 64.5	133 55.7

*Includes Typhoid Fever, Measles, Scarlet Fever, Whooping Cough, Diphtheria, Tuberculosis Pulmonary, Cerebrospinal Meningitis, Poliomyelitis, Influenza.

Births, Marriages and Deaths

Statistics
February, 1928

	Population Est. as of July 1, 1928 Based on U. S. Census	TOTALS				DEATH RATES			AGE GROUPS		
		Births	Stillbirths	Marriages	Deaths	All Causes (per 1,000 population)	Tuberculosis (per 1,000 population)	Children under 1 year (per 1,000 births)	Under 1 year	1 to 5 years	65 years and over
State of Connecticut	1,613,874	2235	72	668	1486	11.0	0.6	55.7	133	61	607
Ansonia	19,805	33	2	7	18	10.9	.....	157.2	3	1	5
Branford	7,133	12	.....	4	6	10.1	3.4	117.6	1	.....	2
Bridgeport	179,163	224	13	58	158	10.6	1.1	103.8	27	5	43
Bristol	26,820	46	1	11	22	9.8	.....	18.6	1	.....	6
Danbury	21,931	42	1	10	40	21.9	1.0	20.8	1	1	20
Derby	13,194	16	.....	3	8	7.3	0.9	.....	.....	.....	3
East Hartford	14,311	33	.....	3	10	8.4	.....	90.2	1	1	5
East Haven	5,030	10	.....	1	5	11.9	.....	137.9	1	.....	2
Enfield	13,445	19	.....	3	10	8.9	.....	59.1	1	.....	7
Fairfield	16,091	18	.....	3	7	5.2	0.7	88.2	1	.....	2
Glastonbury	6,288	9	.....	1	5	9.5	.....	.....	.....	.....	3
Greenwich	26,956	42	1	50	30	13.4	0.9	78.4	3	4	14
Groton	11,607	13	.....	5	10	10.3	.....	.....	.....	.....	8
Hamden	11,002	29	.....	2	16	17.5	1.1	.....	.....	2	6
Hartford	172,288	214	9	82	151	10.5	0.9	31.7	11	4	57
Killingly	9,517	13	.....	6	7	8.8	.....	.....	.....	1	3
Manchester	22,478	27	1	4	16	8.5	.....	59.0	2	.....	6
Meriden	37,085	50	4	16	36	11.6	0.3	75.8	5	2	11
Middletown	23,000	21	3	5	23	12.0	0.5	39.2	2	1	9
Milford	15,273	10	.....	4	6	4.7	.....	80.0	1	.....	2
Naugatuck	17,069	23	1	24	9	6.3	1.4	.....	.....	.....	3
New Britain	72,654	116	4	25	32	5.3	0.2	15.3	2	2	6
New Haven	187,705	262	11	69	181	11.6	0.5	40.4	12	18	76
New London	30,770	32	1	29	22	8.6	0.4	47.9	3	2	11
Norwalk	30,537	44	1	22	45	17.7	1.9	52.2	3	2	16
Norwich	30,762	68	.....	11	39	15.2	1.2	33.3	2	.....	17
Plainfield	8,909	9	.....	4	1	1.3	.....	.....	.....	.....	.....
Plainville	5,191	6	1	2	4	9.2	.....	.....	.....	.....	3
Plymouth	6,554	9	.....	2	5	9.2	.....	151.8	1	.....	1
Putnam	9,334	8	1	5	6	7.7	.....	.....	.....	.....	2
Seymour	8,526	12	.....	2	7	9.9	1.4	190.5	1	1	3
Shelton	12,000	19	.....	2	9	9.0	.....	305.1	3	.....	2
Southington	10,123	22	.....	1	8	9.5	1.2	.....	.....	.....	2
Stafford	5,490	9	.....	3	5	10.9	.....	.....	.....	.....	4
Stamford	49,923	87	2	34	38	9.1	0.7	39.4	4	1	20
Stonington	11,152	7	1	3	6	6.5	1.1	.....	.....	.....	4
Stratford	17,451	29	1	2	12	8.3	.....	262.2	4	1	5
Thompson	5,252	5	.....	3	4	9.1	.....	.....	.....	1	3
Torrington	25,453	33	3	4	19	9.0	1.4	51.7	2	1	7
Vernon	8,751	9	.....	5	8	11.0	.....	.....	.....	1	6
Wallingford	12,747	16	.....	7	11	10.4	0.9	123.7	1	.....	5
Waterbury	107,908	127	4	38	98	10.9	0.3	69.8	12	5	29
Watertown	7,732	13	.....	3	6	9.3	.....	285.7	2	.....	2
West Hartford	12,763	27	.....	5	18	16.9	1.9	.....	.....	.....	12
West Haven	19,334	32	.....	10	25	15.5	0.6	34.2	1	.....	8
Westport	5,862	10	.....	4	8	16.4	.....	.....	.....	.....	6
Wethersfield	5,387	6	.....	2	7	15.6	2.2	.....	.....	.....	2
Winchester	9,144	9	1	1	16	21.0	.....	143.7	2	.....	9
Windham	14,509	24	1	7	13	10.8	0.8	41.4	1	.....	8
Windsor	6,880	11	.....	.....	7	12.2	.....	218.2	1	1	1
Towns under 5,000	205,585	238	4	61	214	12.5	0.4	78.1	15	3	116
Other States		32	.....	.....	19	.....	.....	.....	.....	.....	4

DEATHS FROM IMPORTANT CAUSES

Diseases of the Heart	Encephalitis Epidemic	Pneumonia Undefined	Typhoid Fever	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Influenza	Tuberculosis-Pulmonary	Tuberculosis Other forms	Cancer	Meningitis-Cerebrospinal	Poliomyelitis	Pneumonia—Lobar	Pneumonia—Broncho	Diarrhea-Enteritis Under 2	Puerperal Diseases	Accident	Suicide	Homicide	Institutional Deaths	Non-resident Deaths
248	2	3	2	3	1	10	18	32	85	8	132	.....	1	102	79	6	11	72	15	2	528	.....
2	.....	.....	.....	.....	.....	.....	.....	1	.....	1	1	.....	.....	.....	1	.....	.....	2	.....	.....	6	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	.....
13	1	.....	.....	.....	.....	2	4	2	17	.....	9	.....	.....	9	8	1	.....	8	2	.....	77	.....
7	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	2	1	.....	.....	4	.....	.....	6	.....
4	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	7	.....	.....	6	1	.....	1	2	1	.....	14	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	3	.....	.....	.....	.....	.....	.....	1	.....	.....	4	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	2	1	.....	.....	.....	1	.....	6	.....
.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	1	.....
3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....	.....	.....	.....	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	1	.....	.....	1	.....	.....	2	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....	.....	.....	.....	.....	.....	2	.....
3	.....	.....	.....	.....	.....	1	.....	2	2	.....	1	.....	.....	1	4	.....	.....	.....	.....	.....	10	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	1	.....	.....	.....	.....	.....	.....	2	.....
1	.....	.....	.....	.....	.....	.....	.....	1	1	.....	2	.....	.....	2	1	.....	1	.....	.....	.....	6	.....
25	.....	.....	1	.....	.....	1	5	2	13	.....	15	.....	.....	10	8	.....	.....	6	1	.....	63	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	1	1	.....	.....	.....	1	.....	.....	.....	.....
5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....	1	.....	.....	.....	1	1	.....	6	.....
6	.....	.....	.....	.....	.....	1	.....	.....	1	.....	3	.....	.....	.....	4	.....	1	1	.....	.....	11	.....
6	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	4	.....	.....	1	3	1	.....	1	.....	.....	11	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	1	.....	.....	1	.....	.....	3	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	2	1	.....	1	.....	.....	.....	3	.....
2	.....	.....	.....	.....	.....	.....	.....	1	1	.....	3	.....	.....	7	1	.....	1	4	1	.....	12	.....
31	.....	.....	.....	3	.....	2	1	1	7	1	19	.....	.....	12	15	.....	1	5	4	.....	75	.....
4	.....	.....	.....	.....	.....	1	1	.....	1	1	1	.....	.....	2	1	.....	.....	1	.....	.....	11	.....
7	.....	.....	.....	.....	.....	.....	.....	.....	5	.....	4	.....	.....	2	3	.....	.....	4	.....	.....	15	.....
8	.....	.....	.....	.....	.....	.....	.....	1	3	1	3	.....	.....	2	4	.....	.....	3	.....	.....	15	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....
2	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	2	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....	.....	2	.....
.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	1	.....	.....	.....	1	.....	.....	.....	.....	1	4	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....
7	.....	.....	.....	.....	.....	.....	1	2	3	.....	3	.....	.....	3	2	.....	.....	.....	.....	.....	11	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	1	.....	.....	.....	.....	.....	5	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
3	.....	.....	.....	1	.....	1	1	3	.....	.....	3	.....	.....	.....	.....	1	.....	1	.....	.....	3	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	2	.....
2	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....
16	.....	2	.....	.....	.....	.....	3	3	3	1	7	.....	.....	6	4	1	2	6	1	1	34	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....
3	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	4	.....	.....	2	.....	.....	.....	.....	.....	.....	6	.....
1	.....	.....	.....	.....	.....	1	.....	.....	1	.....	2	.....	.....	4	.....	.....	.....	1	.....	.....	7	.....
1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	4	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....	3	.....
3	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....	3	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1	1	.....	.....	.....
50	1	.....	1	.....	.....	.....	2	10	6	1	12	.....	.....	13	8	.....	.....	13	2	.....	56	.....
1	.....	.....	.....	.....	.....	.....	.....	1	1	.....	2	.....	.....	2	2	.....	.....	.....	.....	.....	9	.....

Laboratories

SUMMARY OF BUREAU ACTIVITIES

MARCH, 1928

	DIAGNOSTIC					Examinations
	+	—	?	Unclassified	Specimens	
Typhoid	2	243	1	....	240	246
Paratyphoid A	....	246	....	....	....	246
Paratyphoid B	4	241	1	....	....	246
Diphtheria	75	1274	....	....	682	1349
Diphtheria Virulence	8	36	....	....	36	44
Vincent's Angina	4	783	....	....	5	787
Hemolytic Streptococci	33	749	....	....	....	782
Tuberculosis	22	191	....	....	209	213
Syphilis	665	3041	98	....	2890	3804
Gonorrhoea	24	99	....	....	123	123
Pneumonia	2	5	....	....	7	7
Malaria	....	2	....	....	2	2
Rabies	1	4	....	....	5	5
Special specimens	3	13	....	75	15	91
					4214	7945

CHEMICAL AND BACTERIOLOGICAL

Milk samples	311	311
Water samples	185	185
Sewage samples	7	7
Ice samples	1	1
Trade Waste samples	4	4
Ice Cream samples	1	1
Clinical thermometers	707	707
Totals	5430	9161
Total laboratory procedures		21819

Preventable Diseases

INCIDENCE OF DISEASE FOR MONTH OF MARCH, 1928

(As compared with previous years)

A comparison of the daily morbidty reports received during the month of March, 1928, with the corresponding month for the years 1923, 1924, 1925, 1926 and 1927.

	Average 1923-1927 for Mar.	Mean 1923-1927 for Mar.	1923	1924	1925	1926	1927	1928
Cerebrospinal meningitis ..	5	4	9	7	3	4	1	4
Diphtheria	195	195	259	195	206	190	123	108
Encephalitis epidemic	8	4	29	6	4	2	....	2
Measles	1602	782	1327	782	632	4670	600	1574
Poliomyelitis	1	1	1	2	....	2	1	2
Scarlet fever	555	538	372	806	637	421	538	453
Smallpox	7	....	6	29	....	....	....	4
Typhoid fever	8	9	9	12	12	6	2	3
Tuberculosis, pulmonary ..	132	125	144	125	124	145	122	159
Whooping cough	291	253	253	187	192	503	220	572

A comparison of the morbidity of these diseases for the two preceding months, January 1928 and February 1928, with the March 1928 record is as follows:

	Jan. 1928	Feb. 1928	Mar. 1928
Cerebrospinal meningitis	2	4	4
Diphtheria	177	138	108
Encephalitis epidemic	3	5	2
Measles	606	1267	1574
Poliomyelitis	3	1	2
Scarlet fever	496	390	453
Smallpox	125	16	4
Typhoid fever	5	7	3
Tuberculosis, pulmonary	123	135	159
Whooping cough	516	642	572

Cases of Certain Other Reportable Diseases

Chickenpox	417	Smallpox	4
Conjunctivitis infectious....	2	Tetanus	1
Dysentery bacillary	1	Trichinosis	4
Encephalitis epidemic	2	Gonorrhea	109
German measles	11	Syphilis	180
Influenza	199	Chancroid	2
Mumps	1269		
Septic sore throat	5	Total	2206

Cases of Occupational Diseases

Dermatitis	12	Mercurial poisoning	1
		Total	13

Cases of Certain Reportable Diseases

March, 1928

	Population Est. as of July 1, 1927	Typhoid Fever	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Meningitis Cerebrospinal	Poliomyelitis	Pulmonary Tuberculosis	Other Forms Tuberculosis	Pneumonia Lobar	Broncho-Pneumonia	Other Com. Diseases
State Total	**1,613,874**	**3**	**1574**	**453**	**572**	**108**	**4**	**2**	**159**	**39**	**298**	**198**	**2206**
NEW HAVEN CO.	483,603	2	1318	39	265	8	1		66	24	90	30	694
New Haven	187,705	2	761	11	124	3	1		39	23	53	4	516
Waterbury	107,905		10	11	17	3			12		9	1	59
Meriden (city and town)	37,085		151	6	61	1			2		6	7	39
Ansonia	19,805		1	3	7				3		1	2	5
West Haven	19,334		160	2	13				3		6	3	6
Naugatuck	17,069								1		1	1	3
Wallingford town and boro	12,747								1			2	
Milford	15,273		2	2	2				2		1		14
Derby	13,194					1			2	1		1	
Hamden	11,002		160	1	4				1		1	2	5
Branford (town and boro)	7,133		11		1							1	4
Seymour	8,526												
Towns under 5,000	21,792		62	3	36						12	6	43
FAIRFIELD CO.	**387,138**		**26**	**79**	**120**	**43**	**1**		**24**	**1**	**82**	**57**	**320**
Bridgeport	179,163		2	16	16	34	1		12		42	36	44
Stamford (city and town)	49,923		2	8	29	1			8		4	3	98
Norwalk	30,537		19	5	17						1	1	24
Danbury (city and town)	21,931			31		2			1		13	4	2
Greenwich (town and boro)	26,956		2	9	25	1				1	12	5	54
Stratford	17,451			3		1					3	1	8
Fairfield	16,091				19				1		1		9
Shelton	12,000		1	3		1			1			1	2
Westport	5,862												
Towns under 5,000	27,224			4	14	3			1		6	6	79
HARTFORD CO.	**411,342**		**209**	**91**	**91**	**28**		**1**	**41**	**10**	**72**	**80**	**580**
Hartford	172,288		61	23	27	13			28	8	31	30	174
New Britain	72,654		2	17	15	4			5		11	11	187
Bristol (city and town)	26,820		1	4					2	1	7	2	40
Manchester	22,478		121	6	3	5			1		2	6	5
Enfield	13,445			3		1					3	3	11
East Hartford	14,311		12	4	4				1		1	3	5
Southington (town and boro)	10,123		1		18						4	3	5
West Hartford	12,763		7	11	6	1					5	4	25
Windsor	6,880		3	1	12						1		5
Glastonbury	6,288											9	1
Wethersfield	5,387								1	1	1		33
Plainville	5,191								1				
Towns under 5,000	42,714		1	22	6	4		1	2		6	9	89
NEW LONDON CO.	**116,306**	**1**	**12**	**62**	**40**	**8**	**2**		**12**	**1**	**20**	**4**	**84**
Norwich (city and town)	30,762		9	13	14	3	2		4		5	1	10
New London	30,770	1	1	22	14				6	1	2	1	18
Stonington (town and boro)	11,152		1	1									
Groton (town and boro)	11,607			8	9				1		8	1	15
Towns under 5,000	32,015		1	18	3	5			1		5	1	41
LITCHFIELD CO.	**81,518**		**1**	**160**	**12**	**19**		**1**	**1**		**11**	**4**	**220**
Torrington (town and boro)	25,453			135		16			1				
Winchester (inc. Winsted)	9,144												
Plymouth	6,554		1	1							5	1	
Watertown	7,732				6	2		1					17
Towns under 5,000	32,635			24	6	1					6	3	203
WINDHAM CO.	**56,717**		**1**	**9**	**8**	**2**			**4**		**5**	**5**	**134**
Windham (inc. Willimantic)	14,509			3					2		2	2	3
Putnam (city and town)	9,334												25
Plainfield	8,909				3	1							
Killingly (inc. Danielson)	9,517			3	2				2			2	24
Thompson	5,252				2						1		
Towns under 5,000	9,196		1	3	1	1					2	1	82
MIDDLESEX CO.	**49,372**		**2**	**2**	**36**				**9**	**2**	**15**	**17**	**52**
Middletown (city and town)	23,000				19				1		7	16	34
Middletown State Hospital									4				1
Towns under 5,000	26,372		2	2	17				4	2	8	1	17
TOLLAND CO.	**27,878**		**5**	**11**					**2**	**1**	**3**	**1**	**122**
Vernon (inc. Rockville)	8,751			2					2		1		75
Stafford (town and boro)	5,490			2						1	1		11
Towns under 5,000	13,637		5	7							1	1	36

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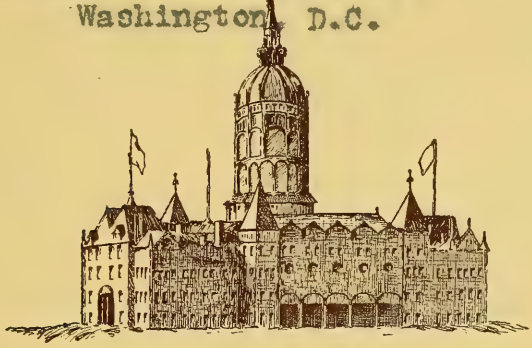

Connecticut Health Bulletin

"For a Clean State and a Healthy People"

Vol. 42 **May, 1928** **No. 5**

SPECIAL ARTICLES

Laboratory Testing of Clinical Thermometers as a Public Health Problem

Your Child is What you Make Him—Fear as a Mental Hazard

STANLEY H. OSBORN, M. D., C. P. H., Commissioner

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MONTHLY HEALTH BULLETIN

Vol. 42 May, 1928 No. 5

LABORATORY TESTING OF CLINICAL THERMOMETERS AS A PUBLIC HEALTH PROBLEM*

By Friend Lee Mickle, M.S., and Caryl C. Carson, M.S.

In Connecticut† alone is the laboratory testing of clinical thermometers a State Department of Health activity. The Connecticut thermometer law is a licensing law in that licenses are issued to a manufacturer to engrave certain thermometers with the Connecticut Seal, including a designated letter assigned to him following (1) application on special form, (2) inspection of his place of manufacture and (3) laboratory testing of representative lots of his thermometers furnished by him to demonstrate his ability to manufacture an accurate instrument. Licenses are revoked or suspended by the State Commissioner of Health when laboratory tests show more than 5 per cent below state requirements, the manufacturer having first been given the privilege of a formal hearing to show cause why such action should not be taken. Under the provisions of the Connecticut law the Commissioner of Health is empowered to promulgate tolerances and specifications for clinical thermometers and a correct clinical thermometer is designated as one which conforms to such specifications. The department is empowered to certify or to seal a correct thermometer, to seize one that is incorrect and to issue permits to manufacturers.

When the clinical thermometer law was passed by the General Assembly in 1921, the status of thermometers already in use was unaffected as the law applies only to the sale of this commodity. At the time testing was begun all dealers were notified by the State Department of Health that after six months only Connecticut Seal thermometers would be legal for sale in the state, except that thermometers already on the shelves of dealers might be sold when accompanied by certificates of accuracy from the Bureau of Laboratories provided they had been submitted for certification within the same period. Aside from the testing of the above mentioned thermometers for certification, thermometers are routinely received for examination from the following sources:

*Abstract of paper read before the Laboratory Section of the American Public Health Association at the Fifty-sixth Annual Meeting at Cincinnati, October 20, 1927. Complete paper appeared in American Journal of Public Health for November 1927.

†For the Commonwealth of Massachusetts a clinical thermometer law is enforced by the Division of Standards.

1. Clinical thermometers submitted by the manufacturer when applying for license as a representative sample of his product, usually in lots of from 50 to 200.

2. Connecticut Seal-marked clinical thermometers submitted in duplicate by the manufacturer as exact samples of each type he wishes to manufacture, one sample to be retained by the department.

3. Connecticut Seal-marked thermometers secured from dealers, hospitals, institutions, physicians and individuals for inspection purposes.

4. Manufacturers' standard thermometers (not clinical thermometers) for comparison with the Connecticut State Clinical Thermometer.

In the Bureau of Laboratories clinical thermometers are examined for accuracy of readings within required tolerances, for tendency to "retreat" or failure to hold maximum reading, for hard shaking, for the presence of entrapped gases or of moisture in the bore, dirt in the mercury, and for physical imperfections.

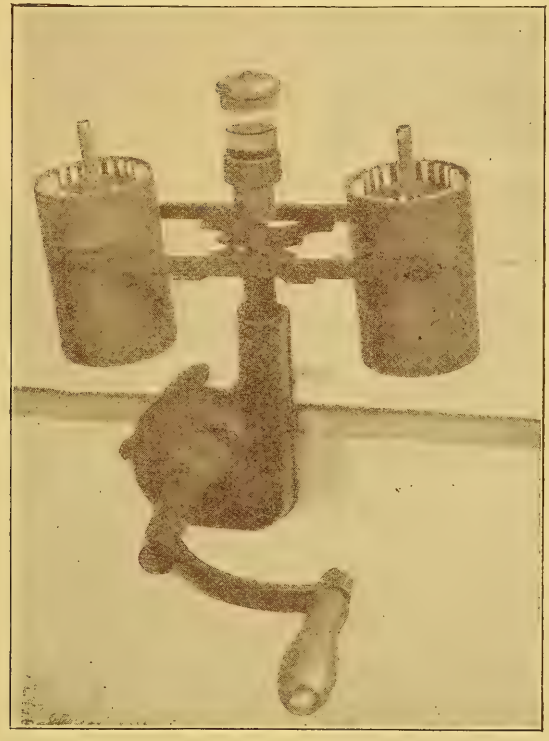
Test For Accuracy of Readings

In this test each thermometer must show no error greater than 0.3°F. (0.2°C.) between any two successive test points, and must be accurate within a tolerance of plus or minus 0.2°F. (or within 0.1°C. if the scale reads in Centigrade degrees) in two separate readings at each of four test points which are either 96°, 100°, 104° and 106°F. or 36°, 38°, 40° and 41°C. when compared in a specially designed water-bath against an official standard thermometer that in turn has been calibrated against the State Clinical Standard Thermometer, the accuracy of which is periodically ascertained by standardizations at the U. S. Bureau of Standards.

Test For Failure To Retain Maximum Reading

When the last reading in the tests for accuracy has been taken the racks of thermometers are replaced in the bath and the temperature raised to 106°F. (41°C.), or to 108°F. (42°C.) if the scale will allow, and the thermometers are allowed to cool very slowly until the temperature of the bath has dropped at least 1°. This is a special test at the top of the mercury column for "retreaters," or thermometers that fail to hold their reading—a serious defect. This type of error is also detected by means of the readings in the tests for accuracy taken twice at each of the four test points. Although a thermometer is allowed a retraction of 0.6°F. from the test point in this test at the top of the mercury column without being on this count alone classed as a " retreater," a slight deviation indicates a "loose" contraction which is subsequently watched.

Since the test for "retreaters" is designed to determine whether the instrument may be expected to fail to hold its readings in actual practice, it has been urged that the conditions of the test should approximate as nearly as possible the actual conditions obtaining when the thermometer is removed from the mouth. The rapid cooling at each test point probably approximates such conditions fairly closely. In our ex-



Hand centrifuge showing racks of clinical thermometers and glycerin speed indicator

perience the slow-cooling test in addition is considered desirable, since a thermometer with a tendency to retreat is potentially of danger to the patient through the inaccurate information furnished to the physician, and we do not believe the use of both tests constitutes unduly severe laboratory conditions.

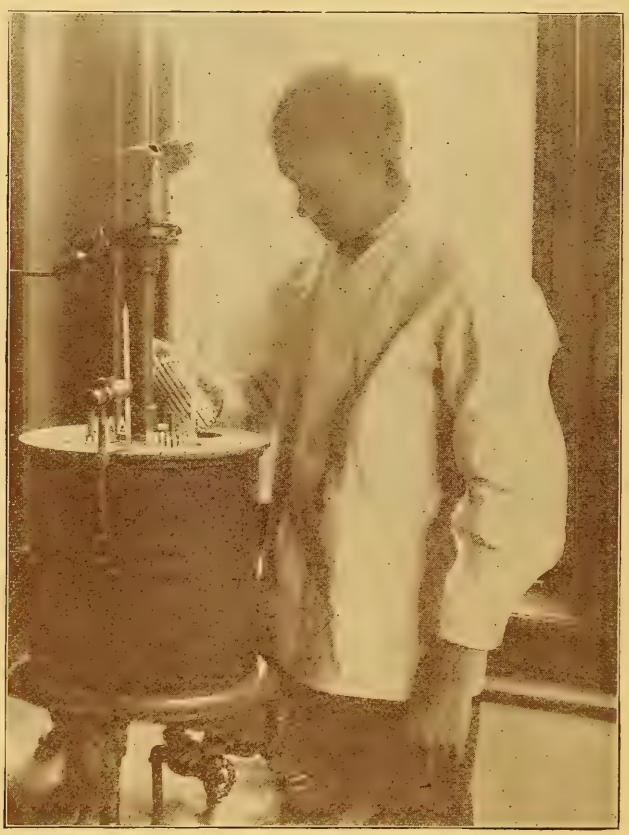
Test for "Hard Shakers"

When the first series of tests for accuracy is completed the thermometers are tested for "hard shaking" or "tight" contractions.

The racks of thermometers are centrifuged at a speed of rotation that has been determined in the U. S. Bureau of Standards as "corresponding to what is considered the maximum muscular effort that should be required to throw back the index." This speed must be determined for each centrifuge. Any thermometer in which the mercury fails to fall below 96° F. (36°C.) in this test is rejected as a "hard shaker." Although theoretically such an instrument is intrinsically a more accurate instrument than one that does shake below 96° F., it is rejected because of the difficulty that would be later experienced in using it.

Test For Entrapped Gases In The Mercury

In this test the thermometers, in racks, are centrifuged until the mercury column is at least below the 96°F. (36°C.) mark



Placing holder with clinical thermometers in bath. Illustration shows two standard thermometers in use

to clear the bore of most of the mercury, and the thermometers are placed in a beaker of water at a temperature between 95° F. and 98° F. to assure that sufficient mercury is in the bore to allow the test to be easily carried out.

The column of mercury is then separated by "shaking-off" the thermometers; that is, by very slowly (to avoid throwing the separated column of mercury to the upper end of the bore) centrifuging them, inverted, in the racks. After the mercury column is separated by this operation, the bulbs are immersed in a freezing mixture of about 1 part of sodium chloride to 5 parts of crushed ice in a beaker and allowed to remain about 15 minutes, when each thermometer is taken individually from the brine and the bulb tapped gently on a board or a padded table top to cause any particles of air entrapped in the bulb to rise to the top of the mercury.

The mercury in the bulb is then caused to rise above the constriction by holding the bulb of the thermometer near the flame of an alcohol lamp. If the two portions of the mercury fail to join completely by reason of any entrapped gas or moisture in the bore the thermometer is rejected. In the trade this test has become universally known as the "air" test. Moisture in the mercury is determined in this test and also when a small portion of the mercury column lodges at the top of the bore and fails to shake down when the thermometer is centrifuged.

Physical Examination

Each clinical thermometer is examined to see that the coloring matter remains uniformly in all graduations; that the graduation marks are regularly and not too closely spaced; are of uniform width; that the numbers are easily legible; and that the thermometer is free from physical defects, including acid scars, traps in which germs might lodge and cracks in the glass. Thermometers with colored bulbs are rejected.

Summary of Five Years' Enforcement

Although the law was passed in 1921, routine laboratory testing did not begin until nearly two years later. During the five years that testing has been done, 11,248 thermometers have been examined. Of that number, 1,655 (or 15 per cent) have been rejected as failing to meet Connecticut specifications.

To date 14 firms have held permits to sell clinical thermometers in Connecticut; 3 licenses have been revoked and in addition 2 firms have surrendered their permits under pressure from the department. Two of the 3 manufacturers whose permits were taken from them were later reinstated. It has been necessary to suspend several licenses temporarily while the

manafacturer was given an opportunity to correct factory conditions, adjust labor troubles, or show cause why his license should not be revoked. Licenses have been refused to 8 applicants who have submitted thermometers, and 13 other concerns have made application but did not submit samples for test. At the present time 11 thermometer makers hold Connecticut permits.

Conclusions

Connecticut experience convinces us that the laboratory testing of clinical thermometers is a desirable undertaking on the part of the state in indirectly safeguarding the health of its citizens and in preventing fraud. We believe the testing of clinical thermometers should be a state public health activity and not carried out by some other state agency, because the close cooperation between the state health department and physicians, hospitals and nurses facilitates the securing of thermometers for laboratory testing; minimizes the work of enforcement, of condemnation of inaccurate instruments and of their replacement by the manufacturer to the user; and enables the health authorities to be of additional assistance to the medical profession in the control of contagious disease.

WHEN YOU BUY

BE SURE YOU GET A

CONN. SEAL

CLINICAL THERMOMETER

YOUR CHILD IS WHAT YOU MAKE HIM
FEAR A MENTAL HAZARD

By Winifred W. Arrington

THIS CHILD Has learned fear. He runs away.

This child's **Parents** are afraid of many things. They dread the dark, storms, animals, burglars. They teach their child to be timid.

They threaten their child with ghosts, policemen, gypsies, and impossible punishments.

They worry about their child's health, even though it is good.

They make decisions for their child; tell him what books to read, what clothes to wear, what playmates to seek, what fun to have.

They deny their child independence; dress him, cut up his food, take him to the bathroom, go with him to school.

Fear a Mental Hazard

Fear is subject to abuse and real danger alone should excite it. Indeed, one sign of sound mental health is the ability to distinguish between real and false danger and to respond only to the right emergency. Fear paralyzes as well as stimulates, and habitual fear becomes an enemy which undermines resistance.

Yet many people are controlled by fear. They grow up in dread of imaginary perils, and are helpless before each new experience. Everyday life seems full of threats to their personalities as well as to their physical safety. Never can they succeed in realizing their possibilities, for always, at the crucial moment confidence deserts them and they fall prey to apprehension. At length, because they cannot cope with life, these individuals frequently break down mentally.

Going behind the scenes with such people, we find that their handicap descended on them early in childhood. Usually the parents were at fault. By their own timidity they set the example—fretting about unimportant things, dreading accidents and burglars, showing terror during thunderstorms. Perhaps they were overanxious about their own health, and accustomed Bobby or Jane to focus attention on every passing ache or pain. Perhaps they made a ritual of rubbers, thick underwear, and spring tonics, and taught their children to avoid wholesome outdoor play as violent exercise, bad for the heart.

Worse still, they may have used extravagant threats. These threats the child in time found empty and absurd, but not before the damage had been wrought; they attacked his imagination at the most impressionable period of life, and left scars that never faded.

Worst mistake of all, these parents may have set limits on the child's initiative. Out of the many things which, from the earliest age, he was capable of doing for himself, they permitted him to do but few. Long after it became superfluous they continued to dress him, to superintend his bodily habits, to force his choice of friends, reading and interests. He was never permitted the thrill of going about by himself. His natural love of adventure was hopelessly curtailed. One whole section of his development was appropriated by his parents and annexed to their own lives. They robbed him of a birthright, and in doing so established in him an attitude of self-distrust. Why should grown-ups spare him so assiduously unless the world were a perilous place or unless he were incapable of dealing with it? Independence must indeed be difficult to acquire and must come at a heavy price!

The young child's world is largely what his parents make it. Often it is less what they say than what they imply that shapes his attitudes. Unspoken convictions, body tension, slips of speech, or undue diligence and solicitude all convey far more than their authors intend. Meantime, the child's early emotional trends are forming and they are laying the indestructible foundation for adult personality and adult living. It may be a foundation for potential insanity, or a foundation for efficiency and success. With the parents rests the final responsibility for the result. It is they who determine whether the child shall in the end be mentally healthy or mentally diseased.

Laboratories

SUMMARY OF BUREAU ACTIVITIES

APRIL, 1928

	DIAGNOSTIC					Examinations
	+	—	?	Unclassified	Specimens	
Typhoid	3	184	3	....	176	190
Paratyphoid A	....	190	....	....	....	190
Paratyphoid B	....	189	1	....	....	190
Diphtheria	59	755	....	....	413	814
Diphtheria Virulence	11	41	....	....	47	52
Vincent's Angina	5	585	....	....	1	590
Hemolytic Streptococci	24	564	....	....	....	588
Tuberculosis	32	215	....	....	242	247
Syphilis	639	2614	93	....	2429	3346
Gonorrhea	25	80	....	....	105	105
Pneumonia	4	3	....	....	6	7
Malaria	....	1	....	....	1	1
Rabies	2	3	....	....	3	5
Special Specimens	6	8	....	60	14	74
					3437	6399

CHEMICAL AND BACTERIOLOGICAL		
Milk samples	340	340
Cream samples	8	8
Water samples	244	244
Sewage samples	14	14
Seafood samples	4	4
Clinical thermometers	1757	1757
Totals	5804	8766
Total laboratory procedures		19904

Wassermann Outfits are Fragile

Out of 2,429 specimens of blood received for syphilis examination during the month 50 of them were in bottles that were broken when received at the laboratory and so could not be examined. This is a percentage of 2.1. That number of specimens unfit for examination can cause serious inconvenience to fully the same number of physicians and patients. Every effort is being made in the laboratories to see that outfits are sent out properly packed and in good condition. The post office authorities inform us, and our own experience indicates, that the large proportion of breakage is on containers mailed to the Laboratory. We urge the greatest care in placing specimens in mailing containers, avoiding as far as possible giving specimens to office boys to mail or to persons who will handle them carelessly, and not mailing specimens on carrier belts at the post office as the cylindrical containers will roll off the belt, and in very hot or very cold weather not mailing specimens where they will remain long in out-of-door mail boxes.

Vital Statistics

MONTH OF MARCH

Totals for the first three months of the year, 1926, 1927, 1928

Year	Births	Birth Rate*	Marriages	Mar. Rate*	Deaths	Death Rate*
1926	7,259	18.6±.1	1,924	4.9±.05	5,245	13.4±.1
1927	7,183	18.1±.1	2,016	5.1± .1	4,629	11.6±.1
1928	6,800	16.1±.1	1,683	4.1±.04	4,752	11.8±.1

*Per 1,000 population, annual basis

In the accumulated figures given above a continued drop in the birth rate will be noted. This has been experienced for a considerable time. One of the causes contributing to the decline in birth rate is the low marriage rate. The rate of 4.1 per 1,000 of the population is a very low rate. However, it must be remembered that the effect of Lent is the chief reason why the marriage rate for the first quarter is always low. This will be discussed again in this article when the monthly figures are considered.

A slight increase in the death rate will be noted when 1928 is compared with 1927. This is but a small increase and is by no means an increase which will spoil the records of 1928 which, so far, is comparable to 1927, the record year in the history of Connecticut vital statistics.

Births

Records of 2,265 births were received, 335 below the number reported in 1927, yielding a rate for 1928 of 16.8 as compared with 19.7 a year ago. This is a low rate, of course. It will be materially increased when late reports are received.

Seven towns of more than 5,000 population reported increased numbers of births for the month, comparing 1928 with 1927. These towns are:

Bridgeport	10±22	Fairfield	13±6
Danbury	12±9	Stafford	10±4
Enfield	14±6	West Haven	10±9
Windsor	10±5		

Of these increases those for Fairfield, Stafford and Windsor appear to be noteworthy, with Enfield on the border line. The above figures are to be interpreted as follows: Bridgeport, an increase of 10 actually—an increase (or decrease) of 22 would not have been unusual. Danbury, increase of 12 with 9 not out of the ordinary.

Records of 93 stillbirths were received, giving a total of 2358 births. This will give the stillbirth rate of 39.4±3.9 per 1,000 total births. Last year there were 84 stillbirths among a total number of births of 2684, to give a stillbirth rate of 31.3±3.4 The difference, and it will be noted that there was an increase, is not one to be considered seriously. The actual increase is 8.1, in rate. An increase of 5 is to be expected.

Deaths

The monthly record of deaths has been revised, as will be seen in reviewing the statistics accompanying this article. Two diseases have been added to the list, nephritis (International List, Causes of Death Nos. 128, 129) and diabetes mellitus (57). Homicide has been dropped, but will be available on request. It will also be noted that institutional deaths and non-resident deaths no longer appear. The record of institutional deaths was of doubtful value and as Connecticut is now allocating the deaths for residence, non-resident deaths have no meaning except as concerns deaths of residents of other states and these will be found in the last line of the statistical sheet.

A change will also be noted in the age grouping. Formerly the age grouping was as follows: under 1 year; 1-5 years; and 65 years and over. As very little use was made of this random and widely separated age classification it has appeared reasonable to discontinue it with the exception of the deaths of children under 1 year.

The records of 1,646 deaths were received as compared with 1,577 a year ago, an increase of 69. This increase made an increase of 0.3 in rate.

An analysis of the deaths for the month by certain causes and comparing 1928 with 1927 gives the following table:

Cause of Death	1928	1927	Increase	Decrease
Typhoid fever	0	2±1	....	2±1
Measles	8±3	5±2	3±4	....
Scarlet fever	3±2	5±2	....	2±3
Whooping cough	8±3	4±2	4±3	....
Diphtheria	8±3	5±2	3±4	....
Influenza	27±5	52±7	....	25±9
Poliomyelitis	0	0	....	....
Epidemic encephalitis	2±1	1±1	1±2	....
Cerebrospinal meningitis	2±1	0	2±1	....
Tuberculosis, pulmonary	98±10	94±10	4±14	....
Tuberculosis, other forms	17±4	11±3	6±5	....
Cancer	145±12	155±12	....	10±18
Diabetes mellitus	30±6	31±6	....	1±10
Diseases of the heart	272±17	264±16	8±23	....
Broncho pneumonia	91±10	85±9	6±13	....
Lobar pneumonia	116±11	87±9	29±14	....
Pneumonia, undefined	1±1	1±1	....	....

Cause of Death	1928	1927	Increase	Decrease
Diarrhea and enteritis under 2	5±2	10±3	....	5±4
Nephritis	98±10	110±10	....	12±14
Puerperal diseases	18±4	11±3	7±5	....
Suicide	23±5	14±4	9±6	....
Accident	59±8	79±9	....	20±12
Other causes	615±25	551±23	64±34	....
Totals	1646±41	1577±40	146	77

It will be immediately noted that there is an increased amount of lobar pneumonia and by contrast an even more pronounced decrease in influenza. Increases will be noted for measles, whooping cough and diphtheria. None of these is of significance. The increase in lobar pneumonia is significant. Evidently there is considerably more of this form of the disease prevalent this year than last year. Of the decreases, that for influenza is decidedly significant and with a little stretch of the imagination the decrease in accidental deaths is noteworthy.

The figures below show the totals to date for certain causes of death.

Cause of Death	1928	1927	Increase	Decrease
Typhoid fever	5	5	....	....
Measles	15	11	4	....
Scarlet fever	5	7	....	2
Whooping cough	21	20	1	....
Diphtheria	37	22	15	....
Influenza	99	137	....	38
Poliomyelitis	3	1	2	....
Epidemic encephalitis	8	4	4	....
Cerebrospinal meningitis	3	3	....	....
Tuberculosis, pulmonary	265	271	....	6
Tuberculosis, other forms	30	30	....	....
Cancer	433	431	2	....
Diabetes mellitus	*	*	....	....
Diseases of the heart	753	798	....	45
Broncho pneumonia	245	219	26	....
Lobar pneumonia	334	273	61	....
Pneumonia, undefined	7	5	2	....
Diarrhea and enteritis under 2	24	37	....	13
Nephritis	*	*		
Puerperal diseases	42	45	....	3
Suicide	62	43	19	....
Accident	229	241	....	12
	2620	2603	136	119

*Not available at present

The table above is extremely interesting. While some diseases have had their ups and downs the net totals for the two years are within 17 of each other.

The most decided increases are due to diphtheria, the pneumonias and suicide. It is perhaps surprising to note the de-

crease of 38 in influenza. The other decreases of importance are those for diseases of the heart, diarrhea and enteritis under 2, and accidental deaths. In the last are included 17 deaths from automobile accidents, there being exactly the same number in each year.

In passing it must be noted that the infant mortality is low.

The marriage rate of 2.8 per 1,000 of the population is the lowest to have appeared in the last six years.

FOR SIX YEARS—MARCH, 1928

CONNECTICUT	1923	1924	1925	1926	1927	1928
BIRTHS	2721	2806	2606	2444	2600	2265
Birth Rate	22.1	22.4	20.4	18.8	19.7	16.8
DEATHS	1959	1762	1723	2051	1577	1646
Death Rate	15.9	14.1	13.5	15.8	11.9	12,2
MARRIAGES	490	678	508	413	487	383
Marriage Rate	4.0	5.4	4.0	3.2	3.7	2.8
COMMUNICABLE DIS.* DEATHS	367	178	216	349	162	154
Per Cent to Total Deaths	18.7	10.1	12.5	17.0	10.4	9.4
DEATHS UNDER 1 YEAR	260	230	215	223	164	155
Rate Per 1,000 Births	101.2	86.8	86.6	92.7	68.6	65.7

*Includes Typhoid Fever, Measles, Scarlet Fever, Whooping Cough, Diphtheria, Tuberculosis Pulmonary, Cerebrospinal Meningitis, Poliomyelitis, Influenza.

Statistics
March, 1928

	Population Est. as of July 1, 1928 Based on U. S. Census	TOTALS				DEATH RATES			Typhoid Fever (1)	Measles (7)	Scarlet Fever (8)
		Births	Stillbirths	Marriages	Deaths	Deaths under 1 year	All Causes (per 1,000 pop.)	Children under 1 year (per 1,000 births)			
State of Connecticut	1,613,874	2265	93	383	1646	155	12.2	65.7	.....	8	3
Ansonia	19,805	22	.....	6	26	1	15.8	52.4	.....	.....	.....
Branford	7,133	10	.....	2	7	.....	11.8	.....	.....	.....	.....
Bridgeport	179,163	261	17	29	179	22	12.0	84.5	.....	.....	.....
Bristol	26,820	57	3	3	31	2	13.9	37.2	.....	1	.....
Danbury	21,931	44	1	3	36	3	19.7	62.4	.....	.....	.....
Derby	13,194	8	4	1	10	1	9.1	28.3	.....	.....	.....
East Hartford	14,311	23	.....	3	12	1	10.1	90.2	.....	.....	.....
East Haven	5,030	8	.....	.....	3	.....	7.2	.....	.....	.....	.....
Enfield	13,445	24	1	.....	9	1	8.0	59.1	.....	.....	.....
Fairfield	16,091	13	.....	4	10	.....	7.5	.....	.....	.....	.....
Glastonbury	6,288	5	.....	.....	2	.....	3.8	.....	.....	.....	.....
Greenwich	26,956	40	.....	42	22	4	9.8	104.4	.....	.....	.....
Groton	11,607	14	2	7	15	2	15.5	190.4	.....	.....	1
Hamden	11,002	29	.....	2	14	2	15.3	183.2	.....	.....	.....
Hartford	172,288	269	10	44	145	17	10.1	48.9	.....	.....	.....
Killingly	9,517	6	.....	5	11	1	13.9	69.0	.....	.....	.....
Manchester	22,478	33	.....	5	18	1	9.6	29.5	.....	1	.....
Meriden	37,085	58	4	7	34	4	11.0	60.8	.....	.....	.....
Middletown	23,000	.....	.....	.....	19	1	9.9	19.6	.....	.....	.....
Milford	15,273	14	2	2	15	1	11.8	80.0	.....	.....	.....
Naugatuck	17,069	16	.....	5	20	1	14.1	116.5	.....	.....	.....
New Britain	72,654	110	1	14	52	8	8.6	61.2	.....	.....	.....
New Haven	187,705	259	9	66	196	16	12.5	53.9	.....	5	.....
New London	30,770	39	4	13	34	3	13.2	48.0	.....	.....	.....
Norwalk	30,537	40	.....	12	38	2	14.9	34.8	.....	1	1
Norwich	30,762	49	2	12	47	5	18.3	83.0	.....	.....	1
Plainfield	8,909	6	1	1	14	.....	18.9	.....	.....	.....	.....
Plainville	5,191	5	.....	1	7	1	16.2	214.3	.....	.....	.....
Plymouth	6,554	13	1	.....	11	3	20.1	455.4	.....	.....	.....
Putnam	9,334	9	.....	5	13	3	16.7	180.0	.....	.....	.....
Seymour	8,526	7	1	.....	10	.....	14.1	.....	.....	.....	.....
Shelton	12,000	13	.....	1	6	1	6.0	101.7	.....	.....	.....
Southington	10,123	24	.....	1	8	1	9.5	89.6	.....	.....	.....
Stafford	5,490	15	2	.....	8	1	17.5	62.8	.....	.....	.....
Stamford	49,923	87	2	14	52	6	12.5	59.0	.....	.....	.....
Stonington	11,152	6	2	4	5	1	5.4	79.5	.....	.....	.....
Stratford	17,451	19	1	2	7	1	4.8	65.6	.....	.....	.....
Thompson	5,252	3	.....	.....	4	1	9.1	134.8	.....	.....	.....
Torrington	25,453	44	.....	3	15	2	7.1	51.8	.....	.....	.....
Vernon	8,751	8	.....	2	6	.....	8.2	.....	.....	.....	.....
Wallingford	12,747	17	.....	3	23	.....	21.7	.....	.....	.....	.....
Waterbury	107,908	125	6	9	83	7	9.2	40.7	.....	.....	.....
Watertown	7,732	16	.....	.....	4	.....	6.2	.....	.....	.....	.....
West Hartford	12,763	21	1	3	22	3	20.7	238.5	.....	.....	.....
West Haven	19,334	46	1	4	25	3	15.5	102.6	.....	.....	.....
Westport	5,862	6	.....	.....	3	.....	6.1	.....	.....	.....	.....
Wethersfield	5,387	4	.....	.....	7	.....	15.6	.....	.....	.....	.....
Winchester	9,144	10	2	.....	5	1	6.6	71.9	.....	.....	.....
Windham	14,509	19	1	2	16	2	13.2	82.8	.....	.....	.....
Windsor	6,880	16	.....	1	7	.....	12.2	.....	.....	.....	.....
Other States	.....	27	.....	.....	29	.....	.....	.....	.....	.....	.....
Towns under 5,000	205,585	248	12	40	251	19	14.7	98.9	.....	.....	.....

for the month of March, 1928

DEATHS FROM IMPORTANT CAUSES

Whooping Cough (9)	Diphtheria (10)	Influenza (11)	Poliomyelitis (22)	Epidemic Encephalitis (23)	Meningitis Cerebrospinal (24)	Tuberculosis-Pulmonary (31)	Tuberculosis-Other Forms (32-37)	Cancer (43-49)	Diabetes Mellitus (57)	Diseases of the Heart (87-90)	Pneumonia-Broncho 100 (1)	Pneumonia-Lobar 101 (1)	Pneumonia-undefined 101 (2)	Diarrhoea and Enteritis under 2 (113)	Nephritis (128-129)	Puerperal Diseases (143-149)	Suicide (165-174)	Accident (175-189)
8	8	27	.....	2	2	98	17	145	30	272	91	116	1	5	98	18	23	59
.....	.....	1	.....	.....	.....	4	1	.....	.....	6	1	1	.....	.....	2	2	.....	1
.....	.....	.....	.....	.....	.....	.....	1	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
1	1	3	.....	1	.....	9	1	20	.....	23	17	11	.....	.....	12	1	1	10
.....	.....	.....	.....	.....	.....	2	.....	4	.....	6	1	4	.....	.....	1	.....	1	2
.....	1	.....	.....	.....	.....	1	1	5	1	7	.....	2	.....	.....	3	1	.....	1
.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1	4	.....	.....	1	1	.....	.....
.....	.....	.....	.....	.....	.....	1	.....	1	1	3	.....	.....	.....	.....	.....	1	.....	1
.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	1	1	1	.....	2	1	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	1	2	2	2	.....	.....	.....	.....	1	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	1	.....	3	3	3	.....	.....	2	.....	.....	2
.....	.....	.....	.....	.....	.....	.....	.....	2	.....	5	.....	1	.....	.....	1	.....	.....	.....
.....	.....	.....	.....	.....	.....	1	.....	.....	1	2	.....	3	.....	.....	.....	.....	1	.....
1	2	3	.....	.....	.....	13	4	15	5	26	3	9	.....	.....	13	4	5	6
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2	.....	6	.....	.....	1	11	1	9	6	33	15	20	.....	.....	8	4	2	5
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.....	.....	4	.....	.....	.....	8	1	7	2	17	1	5	.....	1	2	.....	1	2
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.....	1	.....	.....	.....	.....	.....	1	2	.....	5	1	3	.....	.....	.....	.....	.....	.....
.....	1	2	.....	.....	1	9	3	28	5	40	16	22	.....	.....	18	1	2	6

Preventable Diseases

INCIDENCE OF DISEASE FOR MONTH OF APRIL, 1928

(As compared with previous years)

A comparison of the daily morbidity reports received during the month of April, 1928, with the corresponding month for the years 1923, 1924, 1925, 1926 and 1927.

	Average 1923-1927 for Apr.	Mean 1923-1927 for Apr.	1923	1924	1925	1926	1927	1928
Cerebrospinal meningitis	4	4	5	2	4	5	4	6
Diphtheria	130	138	178	154	138	65	115	103
Encephalitis epidemic	5	4	14	3	4	2	4	1
Measles	1033	779	1002	632	779	2426	326	1476
Poliomyelitis	2	2	....	3	3	1	2	....
Smallpox	5	3	11	10	3	....	....	....
Scarlet fever	461	424	290	719	480	391	424	293
Typhoid fever	5	4	7	3	10	4	2	6
Tuberculosis pulmonary	136	141	141	142	149	128	119	122
Whooping cough	234	266	276	107	400	266	120	441

A comparison of the morbidity of these diseases for the two preceding months, February, and March, 1928, with the April 1928 record is as follows:

	Feb. 1928	Mar. 1928	Apr. 1928
Cerebrospinal meningitis	4	4	6
Diphtheria	138	107	103
Encephalitis epidemic	5	2	1
Measles	1267	1574	1476
Poliomyelitis	1	2	....
Scarlet fever	390	452	293
Smallpox	16	4	....
Typhoid fever	7	3	6
Tuberculosis pulmonary	139	155	122
Whooping cough	642	573	441

Cases of Certain Other Reportabe Diseases

Chickenpox	318	Septic sore throat	6
Conjunctivitis infectious	10	Tetanus	1
Encephalitis epidemic	1	Trichinosis	2
German measles	47	Gonorrhea	128
Influenza	47	Syphilis	201
Mumps	895		
		Total	1656

Cases of Occupational Diseases

Allergic	1	Pneumoconiosis	1
Chemical dermatitis	13	Silicosis	1
Lead poisoning	4		
Mercury poisoning	3	Total	23

Cases of Certain Reportable Diseases

March, 1928	Population Est. as of July 1, 1927	Typhoid Fever	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Meningitis Cerebrospinal	Poliomyelitis	Tuberculosis Pulmonary	Tuberculosis Other Forms	Pneumonia Lobar	Pneumonia Broncho-	Other Com. Diseases
State Total	**1,613,874**	**6**	**1476**	**293**	**441**	**103**	**6**	.....	**122**	**23**	**257**	**168**	**1656**
NEW HAVEN CO.	**483,603**	**1**	**1048**	**35**	**249**	**20**	**1**	.....	**46**	**17**	**83**	**49**	**546**
New Haven	187,705	1	449	5	96	6	1	.....	24	17	29	5	421
Waterbury	107,908	.....	13	10	8	5	.....	.....	7	.....	30	20	36
Meriden (city and town)	37,085	.....	70	4	81	1	.....	.....	5	.....	10	5	47
Ansonia	19,805	.....	5	4	.....	1	.....	.....	1	.....	4	2	3
West Haven	19,334	.....	16	1	9	.....	.....	.....	5	.....	3	6	7
Naugatuck	17,069	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wallingford town and boro	12,747	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Milford	15,273	.....	14	1	1	.....	.....	.....	.....	.....	.....	.....	6
Derby	13,194	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	2
Hamden	11,002	.....	155	2	11	4	.....	.....	2	.....	.....	2	5
Branford (town and boro)	7,133	.....	4	.....	4	.....	.....	.....	1	.....	1	3	1
Seymour	8,526	.....	1	3	.....	1	.....	.....	.....	.....	.....	.....	.....
Towns under 5,000	21,792	.....	321	4	39	2	.....	.....	1	.....	6	6	18
FAIRFIELD CO.	**387,138**	.....	**89**	**49**	**82**	**35**	**3**	.....	**26**	**2**	**68**	**32**	**293**
Bridgeport	179,163	.....	13	18	24	20	1	.....	18	1	43	18	36
Stamford (city and town)	49,923	.....	6	3	15	1	.....	.....	4	.....	8	2	134
Norwalk	30,537	.....	50	3	2	1	.....	.....	.....	.....	2	.....	10
Danbury (city and town)	21,931	.....	.....	16	.....	.....	.....	.....	.....	.....	1	.....	3
Greenwich (town and boro)	26,956	.....	6	2	21	1	1	.....	.....	.....	9	5	54
Stratford	17,451	.....	.....	.....	3	1	.....	.....	.....	.....	2	4	5
Fairfield	16,091	.....	2	.....	3	6	.....	.....	.....	1	1	1	1
Shelton	12,000	.....	3	5	.....	.....	.....	.....	3	.....	.....	.....	3
Westport	5,862	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Towns under 5,000	27,224	.....	9	2	14	5	1	.....	1	.....	2	2	47
HARTFORD CO.	**411,342**	**4**	**244**	**72**	**58**	**32**	**2**	.....	**28**	**1**	**76**	**55**	**562**
Hartford	172,288	2	136	13	16	18	.....	.....	16	1	35	23	194
New Britain	72,654	.....	7	5	6	5	.....	.....	1	.....	11	9	153
Bristol (city and town)	26,820	1	2	3	6	2	1	.....	4	.....	3	3	28
Manchester	22,478	.....	67	5	14	2	.....	.....	1	.....	4	3	7
Enfield	13,445	.....	1	.....	2	1	.....	.....	2	.....	4	.....	12
East Hartford	14,311	.....	4	6	1	.....	.....	.....	1	.....	1	3	.....
Southington (town and boro)	10,123	1	.....	.....	1	.....	.....	.....	.....	.....	2	1	5
West Hartford	12,763	.....	25	23	1	1	1	.....	.....	.....	5	3	36
Windsor	6,880	.....	.....	.....	1	2	.....	.....	.....	.....	2	3	1
Glastonbury	6,288	.....	1	1	.....	.....	.....	.....	.....	.....	.....	2	.....
Wethersfield	5,387	.....	1	1	2	.....	.....	.....	.....	.....	.....	1	13
Plainville	5,191	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1
Towns under 5,000	42,714	.....	.....	15	8	1	.....	.....	3	.....	8	4	112
NEW LONDON CO.	**116,306**	.....	**24**	**38**	**12**	**5**	.....	.....	**12**	**2**	**10**	**6**	**54**
Norwich (city and town)	30,762	.....	20	16	1	2	.....	.....	4	1	.....	.....	11
New London	30,770	.....	1	15	4	.....	.....	.....	1	1	2	1	8
Stonington (town and boro)	11,152	.....	.....	.....	4	1	.....	.....	.....	.....	.....	.....	1
Groton (town and boro)	11,607	.....	1	1	3	1	.....	.....	1	.....	5	1	5
Towns under 5,000	32,015	.....	2	6	.....	1	.....	.....	6	.....	3	4	29
LITCHFIELD CO.	**81,518**	.....	**15**	**62**	**13**	**7**	.....	.....	**4**	.....	**8**	**14**	**85**
Torrington (town and boro)	25,453	.....	1	33	.....	3	.....	.....	1	.....	2	.....	.....
Winchester (inc. Winsted)	9,144	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Plymouth	6,554	.....	.....	4	.....	2	.....	.....	.....	.....	2	10	3
Watertown	7,732	.....	2	8	12	1	.....	.....	2	.....	2	.....	9
Towns under 5,000	32,635	.....	12	17	1	1	.....	.....	1	.....	2	4	73
WINDHAM CO.	**56,717**	.....	**41**	**14**	**2**	**1**	.....	.....	**2**	.....	**3**	**4**	**66**
Windham (inc. Willimantic)	14,509	.....	.....	5	.....	.....	.....	.....	.....	.....	.....	4	9
Putnam (city and town)	9,334	.....	23	.....	1	.....	.....	.....	.....	.....	2	.....	12
Plainfield	8,909	.....	.....	8	.....	.....	.....	.....	.....	.....	.....	.....	2
Killingly (inc. Danielson)	9,517	.....	.....	.....	.....	1	.....	.....	1	.....	1	.....	30
Thompson	5,252	.....	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	3
Towns under 5,000	9,196	.....	1	1	1	.....	.....	.....	1	.....	.....	.....	10
MIDDLESEX CO.	**49,372**	**1**	**9**	**2**	**25**	**3**	.....	.....	**3**	.....	**6**	**8**	**26**
Middletown (city and town)	23,000	1	2	1	11	1	.....	.....	.....	.....	4	2	10
Middletown State Hospital	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1
Towns under 5,000	26,372	.....	7	1	14	2	.....	.....	2	.....	2	6	15
TOLLAND CO.	**27,878**	.....	**6**	**21**	.....	.....	.....	.....	**1**	**1**	**3**	.....	**24**
Vernon (inc. Rockville)	8,751	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1
Stafford (town and boro)	5,490	.....	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	9
Towns under 5,000	13,637	.....	6	17	.....	.....	.....	.....	.....	1	3	.....	14

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Which have for Their Purpose
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So that these Children may enter School for the First Time in the Fall In as Healthy a Condition as it is possible to make Them

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Connecticut Health Bulletin

"For a Clean State and a Healthy People"

Vol. 42 **June, 1928** **No. 6**

SPECIAL ARTICLES

Over Twenty-Two Years of Laboratory Growth

Your Child is What You Make Him—Understanding Brings Security

More About Brom-Cresol-Purple Milk Test

STANLEY H. OSBORN, M. D., C. P. H., Commissioner

Issued Monthly by the

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HARTFORD

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MONTHLY HEALTH BULLETIN

Vol. 42 June, 1928 No. 6

OVER TWENTY-TWO YEARS OF LABORATORY GROWTH

Friend Lee Mickle

Through the courtesy of Wesleyan University a cut has been received of the first building in which the laboratory of this department was located. This was on the grounds of Wesleyan University at Middletown, from the time the laboratory was established in December, 1905 until sometime during 1908. A photograph of the building occupied from 1908 until 1917 was also received from the same source. For the first time we now have a complete pictorial history of the buildings in which the laboratory has been housed throughout the stages of its development.

Because each move has been from smaller to larger quarters and has been made necessary by growth of work, it is interesting to look back on this development of laboratory work from small beginnings to the large and well rounded organization of today. And yet after all the growth of the State Laboratory is only an index rather than a measure of the growth of health laboratory work in Connecticut. In 1906, when the state bacteriological laboratory was established there were only two laboratories owned by municipalities in the state, one by the city of New Haven and the other by the city of Hartford. There were then probably no hospital laboratories making examinations other than examinations of urine and a few simple tests. Today, in addition to the enormously increased facilities of the state laboratories there are 25 laboratories about the state approved by the State Department of Health for diagnostic examination for communicable diseases and ten approved for the bacteriological examination of milk samples, in addition to a number of other health laboratories not so approved and laboratories in which bacteriological and sanitary examinations of water samples are carried out. Thus has the health laboratory universally justified its existence and became a necessity.

It Begins at Wesleyan

The state bacteriological laboratory was authorized by the Legislature in 1905 and the equipping of rooms for its occupancy "was finished so that it was possible to get into the laboratory for work early in December" of that same year. Professor Herbert W. Conn, Professor of Biology at Wesleyan University was appointed the first director, and mainly through his efforts the

trustees of that institution offered for the use of the new laboratory one of its buildings, rent free. In the first annual report of the director of the laboratory it is stated, "This was a building (see Plate I) standing apart from the other buildings of the University and offering every advantage for the work of such a laboratory. Without the aid of Wesleyan University in thus putting at its disposal rooms for the laboratory free of charge it would have been hardly possible to have properly undertaken and carried out the work which it was necessary to do."

Plate I Original Location of Laboratory at Middletown, 1905

The writer understands from conversations he has had with those who worked in the original laboratory that not even all the space in the first building was utilized for laboratory purposes but only space on a mezzanine floor extending perhaps half the length of the building and reached by a crude sort of a stairway, the rest of the building being used for storage purposes. The first annual report states although there were many lines of work which a laboratory ought to be prepared to do and which it was hoped in time could be undertaken, it was necessary

with the small appropriation of $3000 a year to limit the problems to the three which physicians about the state were most desirous of obtaining: The examination of specimens of suspected cases of diphtheria, typhoid fever and tuberculosis. Although it was first planned to make bacteriological tests alone in accordance with the purposes indicated in the original bill establishing the laboratory, "in the month of May (1906) it appeared to the Board of Health feasible and wise to transfer to the same laboratory the work of analysis of the waters of the state" which "had heretofore been carried on at the sanitary laboratory of the Medical Department of Yale University", and which had probably consisted chiefly of chlorine tests on water samples in establishing the isochlors for Connecticut.

It Slowly Expands

What appeared to the director in 1905 to be very adequate quarters for the laboratory health activities of the State would

Plate II Second Location of Laboratory at Middletown, 1908

seem most inadequate at the present time, after not quite 23 years. In fact, after a little more than two years it was necessary to move to larger quarters. While the laboratories were still in the original building the examination of animals' heads for Negri bodies in the diagnosis of rabies (1906-07) and the examination of blood smears for the malarial parasite (1907-08) were undertaken.

During 1908 the laboratories were moved to three large and very convenient rooms in the new Scott Laboratory of Physics (Plate II) offered by Wesleyan University and equipped for laboratory purposes by the state. A small portion of the work was carried on in the private laboratory of the director in Judd Hall of Science. It is interesting here to note the director stated in his second annual report "with these changes the laboratory is very well equipped for all its present and future work and it is not expected that any further changes will be necessary". It is not surprising the extension that was to take place was not at that time visioned, because lines of work have since been undertaken that were then unthought of. Coincident with the move to the larger quarters the staff of the laboratory was increased from three to five persons and the annual appropriation increased to $5000.

During the time the laboratories were located in Scott Laboratory a number of the new types of work were undertaken, including sewage analysis, the examination of blood of animals for glanders, of human blood for syphilis and pus for gonorrhea. The laboratories were located in this second location from 1908 until September, 1917. In May, 1917, coincident with the Public

Plate III Third Location of Laboratory at New Haven, 1917

Act of the Legislature creating a State Department of Health, the state bacteriological laboratory became the Bureau of Laboratories in the new organization.

It Moves to New Haven

After the death of Professor Conn, the laboratories were moved to New Haven, where space was offered on the grounds of the Connecticut Agricultural Experiment Station at such a nominal rent it seemed wise to accept the offer, although the space was limited to one floor and basement in a small frame building (Plate III) originally built for dwelling purposes but previously used by the Station for a botanical laboratory. It was recognized, however, that the period of tenure should be only "until such time as plans could be matured and an appropriation secured for a modern laboratory building". There was a striking increase and development of laboratory activities following the move to New Haven and coincident with the period of the World War when interest everywhere in medical laboratory work was increased. The laboratories were operated in New Haven exactly seven years, or until July, 1924. During that time the staff of workers was increased from approximately six to fourteen workers,

Plate IV Fourth and Present Location of Laboratory at Hartford, 1924

and the annual appropriation to $30,000. A number of new lines of work were undertaken, some of those of special interest being pneumonia typings, examinations of feces and urine for typhoid and paratyphoid fevers, the testing and certification of clinical thermometers, the colloidal gold test for syphilis and the examination of feces in suspected parasitic infections.

It Moves to Hartford

In July, 1924 the laboratories were moved from New Haven to Hartford and located on the second and third floors of a building (Plate IV) near the state capital grounds. Although these quarters, which are still being occupied at the present writing, were not built for laboratory purposes, but have had to be adapted to such use, they are much more commodious and serviceable than the previous ones. Once again the laboratory had for a time ample room for the work it was called upon to do. Coincident with the transfer of the laboratories to Hartford they were placed under a full time director. Since that time the growth of the laboratories has been more rapid than at any time previously, even though new types of work have been limited very strictly to purely public health activities, such as examinations of cultures for the organisms of Vincent's Angina and for hemolytic streptococci, the Kahn precipitation test on bloods for syphilis, sea food studies, a limited number of blood cultures and special examinations.

Present Demand for Laboratory Work

It is interesting to compare the first annual report of the laboratory (for 1906) showing 567 specimens for tuberculosis, 213 for Widal test for typhoid fever and 459 diphtheria cultures—a total of 1239 examinations—with the report of the Bureau of Laboratories for the month of May, 1928 on page 134 of this issue. The monthly total of examinations for May, 1928 is 16,501.

The rapid normal growth of the laboratory work, in spite of efforts being made to keep it at a minimum is again constituting a problem to keep it within the appropriation for the purpose and is taxing to capacity the available space in the present quarters. During the present month the number of persons on the staff of the laboratories is 29; of these 15 are scientifically trained college workers, the others technicians, laboratory helpers and the clerical force. Physicians and health officers are constantly making increased demands for service but more work cannot be undertaken in the present crowded quarters.

YOUR CHILD IS WHAT YOU MAKE HIM
UNDERSTANDING BRINGS SECURITY

By Dorothea Rullkoetter, A.B.

THIS CHILD Has understanding, is not easily frightened

This child's **Parents** are themselves free from fears.
They take time to explain; never leave their child in doubt.
They teach their child to give his body care, not worry.
They do for him nothing he can do for himself.
They train him to make his own decisions.
They never shield him from ordinary hardships.

Understanding a Means of Security

How often we hear a child admonished in answer to his questions, "Oh you can't understand that. Wait until you are older."

Is it that the adult is himself at a loss for the answer? Is it that the question claims time and effort which he is unwilling to give? Or is it that the child has touched a point on which the adult is sensitive and evasive?

Experts declare that when a child is mature enough to frame a question, he is mature enough to be answered. The information offered need not be detailed, but it should be satisfying

and widen the child's understanding. Evasions and false replies do definite harm; they leave the child baffled; they arouse fear and uncertainty; and invariably they stimulate curiosity and focus more attention than ever on the problem from which the child's thought is supposedly diverted.

Fear and understanding seldom exist together. The child who begins life with understanding and is helped to increase it as he develops, will have the best possible equipment to meet difficult situations throughout life. Understanding implies a positive and constructive view, but it is the parents who must aid the child to acquire it.

To be of real help they must so far as possible rid themselves of their own fears and misunderstandings. They must respect the child as an individual and comprehend his needs and point of view. Seeing him as a personality in the making, they will choose their words to fit his ideas. They will realize that thoughtless misrepresentations may create distrust and prevent him from turning experience to his advantage. They will not attempt to hide from him, for example, that the doctor, in making him well, may have to hurt him, but they will emphasize that the doctor is a friend. The business of the policeman, they will explain, is to protect people, children especially. Under no circumstances will they threaten to have the policeman take the child to jail. They will encourage the child to love animals and not fear them. For their child the dark will have no terrors because from earliest infancy he will have slept alone in a dark room. His nights will not be peopled with goblins and bogey men for the parents will never have used these as idle threats. Storms will be interesting events since the child will know how they come about. And so with changes in the child's own body. They will never cause alarm for the parents will have anticipated and explained them.

One of the first fears which the parents must have discarded is the fear that the child cannot take care of himself. Even though they can act for him more efficiently, and obtain greater satisfaction from his very dependence, they will permit him to make his own trials and learn from his own errors. As a young child he will dress and undress himself and manage his own food at the table. From the first of the school period he will go unaccompanied and be responsible for meeting the obligations which he recognizes as his. He will be encouraged to make decisions of his own, and if they conflict with family or school interests, he will be helped to understand clearly why they must be altered.

Between this child and his parents there will be understanding and mutual respect. The child, because he understands each step he takes, will have security and will be prepared for what life brings him. He will not be likely to have a mental breakdown.

NEWS FROM THE FIELD

Physicians Licensed during April and May

Bridgeport, Szollosy, Alexander, 323 Pine Street

Hartford, Buck, Burdette J., Hartford Hospital
DePasquale, Francis L., 1992 Broad Street
Goldenberg, Jacob Jos., 175 Westland Street
Larabee, John W., Hartford Hospital

New Canaan, Lowsley, Oswald L., Twin Knolls, White Oak Shade Road

New Haven, Fineberg, Henry Irwin, 1325 Boulevard
Edwards, Herbert R., 435 Whitney Avenue

Norwalk, Keller, Louis, Norwalk General Hospital

Salsbury, Howard, James W.

Stamford, Bowlby, Herbert Mead, 20 Rippowan Village

Taftville, Marcotte, Edward G.

Waterbury, Archambault, Henry A., St. Mary's Hospital
Bizzozero, Orpheus J., Waterbury Hospital
Smith, Goodrich Truman, 28 Prospect Street

Changes Among Health Officers

Middlesex County Health Officer M. Eugene Culver, Esq., has announced the appointment of Eugene Frederick Callender, M.D., town health officer of Middlefield, and also of Durham to succeed the late Dr. T. P. Walsh.

J. H. Mountain, M.D., has been appointed health officer of Middletown to fill the unexpired term of the late Dr. Walsh.

In the town of Preston no appointment has been made since the resignation of Health Officer Dr. Katherine Bryan.

Brom-Cresol-Purple Milk Test

In the March number of the health bulletin a brief note was published regarding the use of the brom-cresol-purple test in detecting udder infection in an outbreak of scarlet fever occurring along a milk route. As a number of inquiries have been received regarding this test it would appear to be not as well known generally as had been thought. For the origin of this test the reader is referred to the following two bulletins issued by the New York Agricultural Experiment Station at Geneva, New York, as it was upon those investigations that the test was originally based: "Conditions Causing Variation in the Reaction of Freshly-drawn Milk" by L. L. Van Slyke and J. C. Baker, Technical Bulletin No. 70; "The Reaction of Milk in Relation to the Presence of Blood Cells and of Specific Bacterial Infections of the Udder" by J. C. Baker and R. S. Breed, Technical Bulletin No. 80. It is there stated that probably the first worker to show that milk from infected udders was abnormal in chemical composition and less acid in reaction than normal

milk was Storch. Similiar results were later obtained by several investigators and Rullmann showed that milk having a high leucocyte count likewise has a low titratable acidity. The work of these and other workers is summarized in the bulletins referred to and references to the early work are given.

Through correspondence with Dr. Breed, one of the authors just referred to, we have been informed that Professor John Golding of the Dairy Research Institute at Reading, England, has further simplified this test by preparing brom-cresol paper. That is done by allowing the solution to soak into filter paper which is then dried. Strips of this paper can be taken to the herd and the reaction from a drop of milk from each quarter of each udder tested. The use of the paper saves carrying sample bottles and the subsequent examination of the milk. Golding's paper appeared in the Journal of the Royal Agricultural Society for 1920. He is using this technique in the cheese district where garget causes trouble because it does not curdle readily with rennet.

Public Health Meetings

May and June are "meeting" months judging from the large number of groups convening during this time.

On May 8, the Connecticut Graduate Nurses' Association held its spring meeting at Middletown with special sessions in the morning for Public Health Nurses, Board Members, Private Duty Nurses, and Educational Groups, and a joint session in the afternoon at which "Changes in Medical and Nursing Education," "Nursery School in Child Development," and "Entrance Requirements of Schools of Nursing" were discussed.

As this bulletin goes to press the Connecticut public health nurses are joining sister groups from other states at Louisville, Kentucky, where the National Organization of three nursing groups are in biennial convention. Connecticut sent a representative group of nurses from various towns as well as several board members of public health nursing organizations.

On May 31, the Litchfield County Public Health Association met at Canaan, while the New Haven County Public Health Association will be held at New Haven on June 7.

On June 6, the Connecticut Public Health Association will meet at New Britain at which time "Sanitation of Summer Resorts in Connecticut," "The Latest Smallpox Outbreak," "Garbage Disposal" and "Motion Pictures as an Aid to Public Health Publicity" will be brought before the group.

Vital Statistics

MONTH OF APRIL

Totals for the First Four Months of the Year, 1926, 1927, 1928

Year	Births	Birth Rate*	Marriages	Mar. Rate*	Deaths	Death Rate*
1926	9,704	18.7±.1	2,904	5.6±.1	7,189	13.8±.1
1927	9,619	18.2±.1	3,002	5.7±.1	6,201	11.7±.1
1928	9,219	17.1±.1	2,554	4.7±.1	6,428	11.9±.1

*Per 1,000 population, annual basis

As has been apparent for some time, the birth rate continues low. Note also the low marriage rate. The deaths for 1928 are some 200 more than a year ago, giving rise to an increased death rate, but the increase is not in an amount to be alarming.

The figures above are the latest revision and include all late reports received to date.

Births

Reports of 2171 births were received, to give the low rate of 16.1 births per 1,000 of the population, annual basis. In numbers, the births for 1928 are 260 below 1927.

There are 50 towns in the state having populations of 5,000 or more. Of these, 21 reported more births in 1928 than in 1927, but only 4 had increases of 10 or more, being:

Greenwich	14±8	Hartford	19±23
Hamden	16±7	Torrington	12±8

The increase for Hamden is the only one of note. The others are less than a significant increase due to chance.

During the month records of 96 stillbirths were received, of which 56 were males and 40 females, giving a sex ratio of 140 males to 100 females. The stillbirth rate this year is 42.3±4.2. Last year there were 82 stillbirths, giving a stillbirth rate, per 1,000 total births, of 32.6±3.6. This increase, even 10, apparently relatively large, is not alarming. Furthermore, when late reports are received for 1928, the total number of births will be increased and the rate correspondingly lowered. These late reports are included in the figures and rates for 1927.

Deaths

The deaths increased somewhat, being 1652 as compared with 1572 in 1927, an increase of 80. The rate is 12.3 as compared with 11.9 in 1927. This is not a large increase. In fact, there is still plenty of time left for 1928 to equal the low record of 1927.

Analysis of the more important causes of deaths gives the following table:

Cause of Death	1928	1927	Increase	Decrease
Typhoid fever	1±1	0	1±1	....
Measles	6±2	3±2	3±3	....
Scarlet fever	3±2	5±2	....	2±3
Whooping cough	14±4	2±1	12±4	....
Diphtheria	2±1	6±2	....	4±3
Influenza	39±6	49±7	....	10±9
Poliomyelitis	0	0	....	....
Epidemic encephalitis	2±1	2±1	....	....
Cerebrospinal meningitis	1±1	1±1	....	....
Tuberculosis, pulmonary	88±9	88±9	....	....
Tuberculosis, other forms	15±4	14±4	1±5	....
Cancer	136±12	126±11	10±16	....
Diabetes Mellitus	26±5	27±5	....	1±8
Diseases of the heart	261±16	239±15	22±24	....
Broncho pneumonia	108±10	67±8	41±13	....
Lobar pneumonia	111±10	100±10	11±15	....
Pneumonia, undefined	6±2	2±1	4±3	....
Diarrhea and enteritis, under 2	8±3	8±3	....	....
Nephritis	97±10	133±12	....	36±15
Puerperal diseases	28±5	18±4	10±7	....
Suicide	15±4	20±4	....	5±6
Accident	91±10	86±9	5±13	....
Other causes	594±24	576±24	18±34	....
Totals	1652±41	1572±39	138	58

In the list above, increases of note are to be discovered. The increases for whooping cough and broncho pneumonia are more than would ordinarily be expected. There is no decrease which is significant.

The table below shows the accumulated results, first four months of the year.

Cause of Death	1928	1927	Increase	Decrease
Typhoid fever	6	5	1	....
Measles	21	14	7	....
Scarlet fever	8	12	....	4
Whooping cough	35	22	13	....
Diphtheria	39	28	11	....
Influenza	138	186	....	48
Poliomyelitis	3	1	2	....
Epidemic encephalitis	10	6	4	....
Cerebrospinal meningitis	4	4	....	....
Tuberculosis, pulmonary	353	359	....	6
Tuberculosis, other forms	45	43	2	....
Cancer	569	557	12	....
Diabetes Mellitus	*	*		
Diseases of the heart	1014	1038	....	24
Broncho pneumonia	353	286	67	....
Lobar pneumonia	445	373	72	....
Pneumonia, undefined	13	7	6	....
Diarrhea and enteritis, under 2	32	45	....	13

*Not available

Cause of Death	1928	1927	Increase	Decrease
Nephritis	*	*		
Puerperal diseases	70	63	7	....
Suicide	77	63	14	....
Accident	320	326	....	6
Totals	3555	3438	218	101

*Not available

The figures above show where some of the increased mortality of 1928 over 1927 is being experienced. There is more mortality from measles, whooping cough and diphtheria. There is very considerably more mortality from the pneumonias. In opposition to this, there is a distinct decrease in influenza. The decrease in deaths due to diseases of the heart is probably not significant. Deaths due to diarrhea under 2 are encouragingly less in 1928.

FOR SIX YEARS—APRIL, 1928

CONNECTICUT	1923	1924	1925	1926	1927	1928
BIRTHS	2571	2569	2456	2445	2431	2171
Birth Rate	20.9	20.5	19.3	18.8	18.4	16.1
DEATHS	1704	1516	1644	1944	1572	1652
Death Rate	13.9	12.1	12.9	14.9	11.9	12.3
MARRIAGES	1166	959	970	980	988	836
Marriage Rate	9.4	7.7	7.6	7.5	7.5	6.2
COMMUNICABLE DIS.* DEATHS	238	180	211	330	154	154
Per Cent to Total Deaths	14.0	11.9	12.8	16.9	9.8	9.3
DEATHS UNDER 1 YEAR	266	165	199	218	158	193
Rate Per 1,000 Births	103.6	62.3	80.1	90.6	65.7	82.5

*Includes Typhoid Fever, Measles, Scarlet Fever, Whooping Cough, Diphtheria, Tuberculosis Pulmonary, Cerebrospinal Meningitis, Poliomyelitis, Influenza.

Statistics
April, 1928

	Population Est. as of July 1, 1928 Based on U. S. Census	TOTALS				DEATH RATES			Typhoid Fever (1)	Measles (7)	Scarlet Fever (8)
		Births	Stillbirths	Marriages	Deaths	Deaths under 1 year	All Causes (per 1,000 pop.)	Children under 1 year (per 1,000 births)			
State of Connecticut	1,613,874	2171	96	836	1652	193	12.3	82.5	1	6	3
Ansonia	19,805	31	.....	8	23	2	13.9	104.8	.....	.....	.....
Branford	7,133	11	.....	4	4	1	6.7	117.6	.....	.....	.....
Bridgeport	179,163	225	11	79	148	19	9.9	72.9	.....	1	1
Bristol	26,820	59	3	12	16	3	7.2	55.8	.....	.....	.....
Danbury	21,931	29	.....	14	36	5	19.7	104.0	.....	.....	.....
Derby	13,194	12	1	.....	12	2	10.9	56.6	.....	.....	.....
East Hartford	14,311	24	.....	8	12	3	10.1	270.6	.....	.....	1
East Haven	5,030	5	.....	.....	3	1	7.2	137.2	.....	.....	.....
Enfield	13,445	20	1	9	3	1	2.7	59.1	.....	.....	.....
Fairfield	16,091	19	.....	8	18	2	13.4	176.4	.....	.....	.....
Glastonbury	6,288	3	.....	3	4	1	7.6	226.4	.....	.....	.....
Greenwich	26,956	41	4	56	35	2	15.6	52.2	.....	.....	.....
Groton	11,607	16	1	4	11	.....	11.4	.....	.....	.....	.....
Hamden	11,002	29	.....	6	8	2	8.7	183.2	.....	.....	.....
Hartford	172,288	270	15	101	188	24	13.1	69.1	.....	.....	.....
Killingly	9,517	13	1	12	6	.....	.....	.....	.....	.....	.....
Manchester	22,478	32	.....	12	18	1	9.6	29.5	.....	.....	.....
Meriden	37,085	42	1	12	39	6	12.6	91.2	.....	.....	.....
Middletown	23,000	1	.....	.....	31	5	16.2	98.0	.....	.....	.....
Milford	15,273	23	.....	7	18	1	14.1	80.0	.....	.....	.....
Naugatuck	17,069	10	.....	12	7	2	4.9	233.0	.....	.....	.....
New Britain	72,654	123	5	23	47	4	7.8	30.6	.....	.....	.....
New Haven	187,705	244	9	112	204	28	13.0	94.4	.....	.....	.....
New London	30,770	34	5	22	34	6	13.2	96.0	1	.....	1
Norwalk	30,537	46	1	16	33	3	13.0	52.2	.....	.....	.....
Norwich	30,762	43	2	29	43	3	16.8	49.8	.....	.....	.....
Plainfield	8,909	8	1	3	14	2	18.9	190.4	.....	.....	.....
Plainville	5,191	3	1	3	6	1	13.9	214.3	.....	.....	.....
Plymouth	6,554	9	.....	.....	7	.....	.....	.....	.....	.....	.....
Putnam	9,334	14	.....	4	7	3	9.0	180.0	.....	.....	.....
Seymour	8,526	11	.....	1	8	1	11.3	190.4	.....	.....	.....
Shelton	12,000	12	.....	9	7	1	7.0	101.7	.....	.....	.....
Southington	10,123	14	.....	9	14	2	16.6	179.2	.....	.....	.....
Stafford	5,490	5	2	2	7	1	15.3	62.8	.....	.....	.....
Stamford	49,923	89	9	42	46	3	11.1	29.5	.....	.....	.....
Stonington	11,152	11	1	5	14	1	15.1	79.5	.....	.....	.....
Stratford	17,451	25	1	7	21	3	14.4	19.7	.....	.....	.....
Thompson	5,252	7	.....	4	4	.....	9.1	.....	.....	.....	.....
Torrington	25,453	39	.....	5	21	2	9.9	51.8	.....	.....	.....
Vernon	8,751	6	1	3	8	1	11.0	77.4	.....	.....	.....
Wallingford	12,747	9	.....	.....	21	1	19.8	123.7	.....	2	.....
Waterbury	107,908	141	4	49	119	14	13.2	81.5	.....	1	.....
Watertown	7,732	17	.....	1	6	2	9.3	285.6	.....	.....	.....
West Hartford	12,763	27	.....	11	27	6	25.4	477.0	.....	.....	.....
West Haven	19,334	30	.....	12	28	5	17.4	171.0	.....	1	.....
Westport	5,862	8	.....	6	7	.....	14.3	.....	.....	.....	.....
Wethersfield	5,387	6	.....	2	1	.....	2.2	.....	.....	.....	.....
Winchester	9,144	11	2	6	15	1	19.7	71.9	.....	.....	.....
Windham	14,509	20	2	7	15	1	12.4	41.4	.....	.....	.....
Windsor	6,880	14	.....	2	3	1	5.2	218.1	.....	.....	.....
Other States		29	.....	.....	15	.....	.....	.....	.....	.....	.....
Towns under 5,000	205,585	201	12	74	210	14	12.3	72.9	.....	1	.....

DEATHS FROM IMPORTANT CAUSES

Whooping Cough (9)	Diphtheria (10)	Influenza (11)	Poliomyelitis (22)	Epidemic Encephalitis (23)	Meningitis Cerebrospinal (24)	Tuberculosis-Pulmonary (31)	Tuberculosis-Other Forms (32-37)	Cancer (43-49)	Diabetes Mellitus (57)	Diseases of the Heart (87-90)	Pneumonia-Broncho 100 (1)	Pneumonia-Lobar 101 (1)	Pneumonia-undefined 101 (2)	Diarrhoea and Enteritis under 2 (113)	Nephritis (128-129)	Puerperal Diseases (143-149)	Suicide (165-174)	Accident (175-189)
14	2	39	.....	2	1	88	15	136	26	261	108	111	6	8	97	28	15	91
.....	.....	1	.....	1	.....	2	.....	1	.....	6	1	3	.....	.....	2	.....	.....	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	4	.....	1	.....	13	.....	10	2	26	6	11	2	1	6	.....	2	8
.....	.....	.....	.....	.....	.....	1	2	.....	1	2	1	.....	.....	1	2	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	2	.....	7	.....	1	.....	1	5	.....	1	1
.....	.....	.....	.....	.....	.....	.....	.....	2	.....	2	1	1	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	1	.....	.....	.....	1	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....
.....	.....	2	.....	.....	.....	.....	.....	3	.....	4	.....	2	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
2	.....	2	.....	.....	.....	.....	1	6	.....	3	3	2	.....	.....	2	.....	.....	6
.....	.....	.....	.....	.....	.....	.....	.....	1	.....	2	1	1	.....	.....	.....	2	.....	1
.....	.....	2	.....	.....	.....	.....	.....	1	.....	1	.....	.....	1	.....	.....	.....	.....	1
1	.....	1	.....	.....	.....	7	.....	19	2	29	8	16	.....	.....	12	3	2	17
.....	.....	.....	.....	.....	.....	1	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....
1	1	1	.....	.....	.....	1	.....	4	.....	4	.....	.....	.....	.....	.....	.....	.....	1
1	.....	.....	.....	.....	.....	2	.....	2	.....	5	4	2	.....	.....	4	2	.....	.....
.....	.....	.....	.....	.....	.....	1	.....	3	1	3	1	4	.....	.....	4	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	2	.....	4	1	2	.....	.....	1	.....	.....	2
.....	.....	.....	.....	.....	.....	1	.....	.....	1	1	.....	2	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	5	1	4	1	6	3	6	.....	.....	4	1	1	4
3	1	1	.....	.....	.....	14	2	20	4	22	21	19	2	.....	13	4	2	10
.....	.....	.....	.....	.....	.....	.....	.....	2	1	7	1	1	.....	2	1	.....	.....	5
1	.....	1	.....	.....	.....	1	.....	2	.....	2	1	1	.....	.....	6	1	.....	4
.....	.....	2	.....	.....	.....	1	.....	3	.....	8	6	1	.....	1	4	.....	1	2
.....	.....	.....	.....	.....	.....	.....	1	2	.....	4	1	.....	.....	.....	.....	.....	.....	1
.....	.....	.....	.....	.....	.....	1	.....	.....	.....	2	.....	.....	.....	.....	2	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	2	1	.....	.....	1	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	1	.....	1
.....	.....	.....	.....	.....	.....	.....	.....	1	.....	3	.....	.....	.....	.....	.....	1	.....	1
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1
1	.....	.....	.....	.....	.....	2	.....	.....	1	3	1	.....	.....	.....	1	.....	.....	.....
.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	3
.....	.....	2	.....	.....	.....	4	.....	1	1	8	3	6	.....	.....	3	1	.....	4
.....	.....	.....	.....	.....	.....	.....	.....	2	.....	4	2	1	.....	.....	.....	.....	1	.....
.....	.....	1	.....	.....	.....	2	.....	2	.....	3	1	1	.....	.....	1	.....	1	1
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	1
.....	.....	1	.....	.....	.....	2	1	2	.....	2	.....	.....	.....	.....	1	.....	1	.....
.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	2	.....	4	.....	1	3	1	.....	.....	1	.....	.....	1
2	.....	11	.....	.....	.....	10	4	8	2	14	8	10	1	.....	2	5	.....	3
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....
.....	.....	1	.....	.....	.....	.....	1	.....	.....	7	2	2	.....	1	1	.....	1	1
.....	.....	.....	.....	.....	.....	2	.....	3	.....	6	1	1	.....	.....	1	.....	1	.....
.....	.....	.....	.....	.....	.....	1	.....	.....	.....	2	1	.....	.....	.....	.....	.....	.....	1
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	1	.....	.....	.....	1	.....	4	.....	3	1	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	1	.....	2	1	3	1	.....	.....	.....	2	.....	.....	.....
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	1	.....	.....	.....	.....	1	1	1	2	1	1	.....	.....	.....	.....	.....	.....
.....	.....	3	.....	.....	1	9	1	15	7	40	17	10	.....	.....	14	6	1	10

Laboratories

SUMMARY OF BUREAU ACTIVITIES

MAY, 1928

	DIAGNOSTIC +	DIAGNOSTIC —	DIAGNOSTIC ?	Unclassified	Specimens	Examinations
Typhoid	2	144	2	....	138	148
Paratyphoid A	....	148	....	....	....	148
Paratyphoid B	....	148	....	....	....	148
Diphtheria	86	1039	....	....	579	1125
Diphtheria Virulence	12	40	....	....	48	52
Vincent's Angina	11	764	....	....	6	775
Hemolytic Streptococci	27	743	....	....	....	770
Tuberculosis	18	195	....	....	207	213
Syphilis	621	2756	95	....	2538	3472
Gonorrhea	32	92	....	....	124	124
Pneumonia	6	4	....	....	10	10
Malaria	....	2	....	....	2	2
Rabies	2	5	....	....	6	7
Special Specimens	5	16	....	78	29	99
Totals					3687	7093

CHEMICAL AND BACTERIOLOGICAL

Milk samples	384	384
Cream samples	4	4
Water samples	213	213
Sewage samples	34	34
Trade waste	3	3
Clinical thermometers	198	198
Totals	4523	7929
Total laboratory procedures		16501

Specimens For Serological Tests

The number of specimens of blood and spinal fluid continue to increase. During the month of May, 1928, 554 more specimens were receivd than during the month of May, 1927. During the three months' period of March, April and May, 1928, there was an increase of 1,149 over the same period for the year 1927.

Preventable Diseases

INCIDENCE OF DISEASE FOR MONTH OF MAY, 1928

(As compared with previous years)

A comparison of the daily morbidity reports received during the month of May, 1928, with the corresponding month for the years 1923, 1924, 1925, 1926 and 1927.

	Average 1923-1927 for May	Mean 1923-1927 for May	1923	1924	1925	1926	1927	1928
Cerebrospinal Meningitis ..	5	4	10	4	4	5	3	8
Diphtheria	128	103	226	125	103	83	103	98
Encephalitis Epidemic	4	4	6	4	5	4	1	4
Measles	1031	985	1035	625	985	2293	215	1472
Poliomyelitis	1	1	1	1	1	....	....	....
Scarlet Fever	389	362	348	495	362	348	390	385
Smallpox	3	1	1	12	2	....	....	11
Typhoid Fever	12	12	12	15	19	12	2	4
Tuberculosis pulmonary	138	140	164	137	104	143	140	145
Whooping cough	239	216	224	109	481	216	163	446

A comparison of the morbidity of these diseases for the two preceding months, March 1928, and April, 1928, with the May, 1928 record is as follows:

	Mar. 1928	Apr. 1928	May 1928
Cerebrospinal meningitis	4	6	8
Diphtheria	107	103	98
Encephalitis epidemic	2	1	4
Measles	1574	1476	1472
Poliomyelitis	2	....	....
Scarlet fever	452	293	385
Smallpox	4	....	11
Typhoid fever	3	6	4
Tuberculosis pulmonary	155	122	145
Whooping cough	573	441	446

Cases of Certain Other Reportabe Diseases

Chickenpox	314	Septic sore throat	3
Conjunctivitis infectious	6	Smallpox	11
Dysentery amoebic	1	Tetanus	1
Encephalitis epidemic	4	Gonorrhea	146
German measles	112	Syphilis	139
Influenza	231	Chancroid	1
Mumps	446		
		Total	1435

Cases of Occupational Diseases

Allergic	10	Silicosis	1
Conjunctivitis	1		
Dermatitis	20	Total	32

Cases of Certain Reportable Diseases

May, 1928

	Population Est. as of July 1, 1927	Typhoid Fever	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Meningitis Cerebrospinal	Poliomyelitis	Tuberculosis Pulmonary	Tuberculosis Other Forms	Pneumonia Lobar	Pneumonia Broncho-	Other Com. Diseases
State Total	**1,613,874**	**4**	**1472**	**385**	**446**	**98**	**8**	.....	**145**	**22**	**275**	**201**	**1435**
NEW HAVEN CO.	**483,603**	**2**	**660**	**11**	**180**	**24**	**2**	.....	**49**	**17**	**75**	**43**	**400**
New Haven	187,705	.....	262	3	74	4	2	.....	22	14	38	1	289
Waterbury	107,908	.....	54	3	8	9	.....	.....	6	1	11	12	31
Meriden (city and town)	37,085	.....	43	.....	45	3	.....	.....	5	2	11	19	44
Ansonia	19,805	.....	14	.....	1	1	.....	.....	3	.....	.....	.....	4
West Haven	19,334	.....	7	1	2	.....	.....	.....	11	.....	3	2	3
Naugatuck	17,069	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wallingford town and boro	12,747	.....	.....	.....	1	2	.....	.....	.....	.....	1	2	.....
Milford	15,273	.....	8	.....	3	.....	.....	.....	.....	.....	.....	.....	3
Derby	13,194	.....	1	1	.....	.....	.....	.....	1	.....	2	.....	.....
Hamden	11,002	2	109	2	28	3	.....	.....	.....	.....	3	1	12
Branford (town and boro)	7,133	.....	1	.....	10	2	.....	.....	.....	.....	.....	.....	2
Seymour	8,526	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Towns under 5,000	21,792	.....	161	1	8	.....	.....	.....	1	.....	6	6	12
FAIRFIELD CO.	**387,138**	**1**	**159**	**47**	**92**	**29**	**5**	.....	**19**	**1**	**51**	**39**	**270**
Bridgeport	179,163	.....	61	12	10	17	2	.....	9	.....	29	30	47
Stamford (city and town)	49,923	1	14	5	24	4	1	.....	3	.....	5	.....	73
Norwalk	30,537	.....	3	2	2	1	1	.....	.....	.....	1	2	3
Danbury (city and town)	21,931	.....	.....	8	.....	1	.....	.....	.....	.....	.....	.....	1
Greenwich (town and boro)	26,956	.....	23	9	32	1	.....	.....	1	.....	4	5	76
Stratford	17,451	.....	1	1	5	1	.....	.....	1	.....	3	.....	.....
Fairfield	16,091	.....	36	2	10	3	.....	.....	1	.....	3	.....	7
Shelton	12,000	.....	.....	1	.....	.....	.....	.....	3	.....	1	.....	3
Westport	5,862	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Towns under 5,000	27,224	.....	16	7	9	1	1	.....	1	1	5	2	60
HARTFORD CO.	**411,342**	**1**	**441**	**179**	**102**	**34**	.....	.....	**39**	**4**	**104**	**84**	**490**
Hartford	172,288	.....	285	24	43	21	.....	.....	30	3	34	40	182
New Britain	72,654	.....	29	4	23	3	.....	.....	3	.....	23	15	111
Bristol (city and town)	26,820	.....	.....	2	10	.....	.....	.....	.....	1	16	9	24
Manchester	22,478	.....	40	3	7	4	.....	.....	.....	.....	4	4	6
Enfield	13,445	.....	.....	.....	2	1	.....	.....	2	.....	3	1	9
East Hartford	14,311	.....	9	6	2	1	.....	.....	1	.....	2	4	7
Southington (town and boro)	10,123	1	3	7	3	.....	.....	.....	.....	.....	4	1	4
West Hartford	12,763	.....	42	12	5	.....	.....	.....	.....	.....	3	3	30
Windsor	6,880	.....	1	.....	2	.....	.....	.....	1	.....	.....	1	9
Glastonbury	6,288	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Wethersfield	5,387	.....	3	.....	.....	.....	.....	.....	1	.....	3	.....	6
Plainville	5,191	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....
Towns under 5,000	42,714	.....	29	121	5	4	.....	.....	.....	.....	12	5	101
NEW LONDON CO.	**116,306**	.....	**72**	**73**	**29**	**3**	.....	.....	**23**	.....	**18**	**12**	**96**
Norwich (city and town)	30,762	.....	23	15	9	.....	.....	.....	5	.....	1	1	12
New London	30,770	.....	6	16	.....	1	.....	.....	3	.....	5	1	11
Stonington (town and boro)	11,152	.....	6	3	.....	.....	.....	.....	.....	.....	1	.....	.....
Groton (town and boro)	11,607	.....	.....	14	13	.....	.....	.....	2	.....	3	4	10
Towns under 5,000	32,015	.....	37	25	7	2	.....	.....	13	.....	8	6	63
LITCHFIELD CO.	**81,518**	.....	**22**	**46**	**16**	**2**	.....	.....	**2**	.....	**13**	**8**	**111**
Torrington (town and boro)	25,453	.....	.....	26	5	1	.....	.....	1	.....	.....	.....	1
Winchester (inc. Winsted)	9,144	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Plymouth	6,554	.....	.....	5	.....	.....	.....	.....	1	.....	1	4	2
Watertown	7,732	.....	2	4	3	.....	.....	.....	.....	.....	6	1	4
Towns under 5,000	32,635	.....	20	9	8	1	.....	.....	.....	.....	6	3	104
WINDHAM CO.	**56,717**	.....	**65**	**10**	**8**	**1**	.....	.....	**3**	.....	**5**	**5**	**22**
Windham (inc. Willimantic)	14,509	.....	2	3	.....	.....	.....	.....	.....	.....	.....	1	.....
Putnam (city and town)	9,334	.....	21	.....	.....	.....	.....	.....	.....	.....	1	1	7
Plainfield	8,909	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Killingly (inc. Danielson)	9,517	.....	4	2	.....	.....	.....	.....	3	.....	3	2	11
Thompson	5,252	.....	32	1	3	1	.....	.....	.....	.....	1	1	2
Towns under 5,000	9,196	.....	6	3	5	.....	.....	.....	.....	.....	.....	.....	2
MIDDLESEX CO.	**49,372**	.....	**50**	**8**	**17**	**4**	.....	.....	**8**	.....	**3**	**1**	**30**
Middletown (city and town)	23,000	.....	4	.....	3	1	.....	.....	3	.....	.....	1	16
Middletown State Hospital	.....	.....	.....	.....	.....	.....	.....	.....	4	.....	.....	.....	1
Towns under 5,000	26,372	.....	46	8	14	3	.....	.....	1	.....	3	.....	13
TOLLAND CO.	**27,878**	.....	**3**	**11**	**2**	**1**	**1**	.....	**2**	.....	**6**	**9**	**16**
Vernon (inc. Rockville)	8,751	.....	.....	2	2	.....	.....	.....	.....	.....	.....	3	.....
Stafford (town and boro)	5,490	.....	.....	2	.....	.....	1	.....	1	.....	3	5	3
Towns under 5,000	13,637	.....	3	7	.....	1	.....	.....	1	.....	3	1	13

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Connecticut Health Bulletin

"For a Clean State and a Healthy People"

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SPECIAL ARTICLES

Connecticut Infant Mortality—1927

Change in Procedure in Milk-borne Outbreaks of Scarlet Fever

Handy Points for Campers to Know—Radio Talk

Your Child is What You Make Him—Evading Issues

STANLEY H. OSBORN, M. D., C. P. H., Commissioner

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MONTHLY HEALTH BULLETIN

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CONNECTICUT INFANT MORTALITY—1927

By William C. Welling

The table below gives the infant mortality rates for the last five years, by age groups and also for a selected list of causes of death. And on page 141 will be found a table exhibiting more in detail the year 1927 by age groups for certain causes.

Infant Death Rates per 1,000 Living Births

Age	1927	1926	1925	1924	1923
Under 1 day	14.8± .7	15.6± .8	14.1± .7	15.0± .7	14.3± .7
Under 1 week	29.3±1.0	32.1±1.0	28.8± .9	30.2±1.0	30.9±1.0
Under 1 month	36.8±1.1	39.8±1.2	39.6±1.2	40.3±1.1	42.0±1.2
Under 6 months	50.7±1.4	58.6±1.3	59.3±1.5	57.4±1.4	62.4±1.4
Under 1 year	58.8±1.5	71.9±1.4	73.6±1.5	68.7±1.4	76.5±1.6
Cause					
Premature birth	17.4±.8	19.7±.8	17.9±.8	19.0±.8	19.1±.8
Broncho pneumonia	5.1±.4	7.0±.5	7.7±.5	6.9±.5	8.2±.6
Diarrhea	5.7±.4	7.4±.5	8.3±.5	8.1±.5	8.6±.5
Injury at birth	6.2±.5	4.7±.4	5.1±.4	6.1±.4	5.8±.5
Malformation	5.8±.4	5.7±.4	6.2±.4	5.0±.5	5.4±.4
Congenital debility	3.8±.4	4.7±.4	5.0±.4	5.4±.4	5.4±.4
Whooping cough	0.8±.1	1.5±.2	2.2±.2	1.2±.2	2.0±.3
Convulsions	0.3±.1	0.3±.1	.6±.1	.3±.1	.5±.1
Acute bronchitis	0.7±.1	1.4±.2	1.1±.2	.9±.2	1.2±.2

(All rates per 1,000 living births)

In the first place, the rate of 58.8±1.5 for the entire year is the lowest rate ever to be recorded in the state. It is not so long ago that the rate was 100 per 1,000 living births—or there was 1 death for 10 births. Last year there was 1 death for each 17 births. Or looking at it in the way of an "odds on" event, the odds that an infant will live, in 1927, were 16 to 1. When the rate was 100 the odds were 9 to 1.

Examining first the age grouping, it will be noted that for the past five years the rate has run with but little variation between 14.0 and 15.5 for deaths during the first day of life. The average rate for this age grouping is 14.76±.25, with a standard deviation for the series of only ±0.5. There is evidently very little change in this rate from year to year. One thing, however, did happen in 1927. There were 429 deaths in the first day, or 25.2 per cent of the total 1,700 deaths. In 1926 there were 457 deaths out of a total of 2,100, or 21.8 per cent.

The next age grouping, deaths during the first week of life, also runs with fair regularity for the last five years. However, the reduction in 1927, compared with 1926, is 2.8±1.4, and by the optimistic would be considered as worthy of note. In this age grouping, in 1927, there was 50 per cent of the total deaths. In 1926 there were 938 deaths among 2,100, or 44.7 per cent.

It has been noted for some time that there appears to be a decided tendency for the infant deaths to occur in the first six months of life. The first two age groupings for 1927 seem to indicate an even more intense concentration, half of the total deaths being assigned to the first week of life. As a week is about 2 per cent of a year, perhaps a better idea of the peak in the first week of life may be gained by noting that 50 per cent of deaths occur in 2 per cent of the period.

To show the concentration in the first six months of life, and comparing 1927 with other years in the immediate past, the following table will be interesting:

Period	1927	1926	1925	1924	1923
First six months	50.7	58.6	59.3	57.4	62.4
Second six months	8.1	13.3	14.3	11.3	14.1
Year	58.8	71.9	73.6	68.7	76.5

It will appear that there has been a reduction in the infant mortality rate for the first six months of life and a decided reduction in the second six months. The ratio of the first six months to the second six months, for 1927, is 6.5 to 1, and in 1926 it was 4.5 to 1, showing again, the greater concentration during 1927 into the first six months. And here is where the real problem of infant mortality lies.

By far the greatest cause of infant deaths is premature birth. During 1927, it accounted for about 30 per cent of the deaths, and in 1926 it was responsible for 27 per cent of the deaths. The prematures contribute about one half of the deaths occurring during the first week of life. This is the cause of death which must be reduced if the infant mortality is to be materially lower than at present. The State Department of Health has for distribution literature on prenatal care, which will be sent upon request to anyone desiring it.

The other leading causes of death were injury at birth, malformation, diarrhea, broncho pneumonia and congenital debility.

CONNECTICUT INFANT DEATHS 1927

	Under 1 day	1-2 days	2-3 days	3 days to 1 week	Under 1 week	1-2 weeks	2-3 weeks	3 weeks to 1 month	Under 1 month	1-2 months	2-3 months	3-6 months	Under 6 months	6-9 months	9-12 months	Total
All Causes	429	184	82	152	847	89	73	54	1063	111	96	194	1464	148	88	1700
Measles	....	....	....	....	....	....	1	....	1	....	....	....	1	2	1	4
Scarlet Fever	....	....	....	....	....	....	1	....	1	....	....	....	1	....	....	1
Whooping Cough	....	....	....	....	....	....	....	1	1	2	4	6	13	6	4	23
Diphtheria	....	....	....	....	....	....	....	....	....	....	1	2	3	2	4	9
Influenza	....	....	....	....	....	1	....	2	3	3	2	6	14	6	3	23
Dysentery	1	....	....	....	1	....	....	....	1	....	....	....	1	....	....	1
Erysipelas	....	....	....	1	1	....	....	3	4	3	1	2	10	2	1	13
Chicken Pox	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	1
Pulmonary Tuberculosis	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	1
Tuberculosis of Meninges	....	....	....	....	....	....	....	....	....	....	....	2	2	5	....	7
Tuberculosis of other organs	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	1
Disseminated Tuberculosis	....	....	....	....	....	....	....	....	....	1	....	....	1	1	....	2
Syphilis	4	....	1	....	5	....	2	1	8	1	....	1	10	1	....	11
Meningitis	....	....	....	1	1	1	2	....	4	....	1	5	10	3	....	13
Convulsions	....	....	....	3	3	....	....	....	3	....	1	3	7	2	1	10
Bronchitis	....	....	....	....	....	....	....	1	1	3	6	8	18	1	2	21
Broncho Pneumonia	....	....	2	4	6	3	5	5	19	22	21	36	98	28	22	148
Lobar Pneumonia	....	....	....	2	2	1	2	2	7	1	3	9	20	18	7	45
Diseases of Stomach	....	....	1	....	1	1	1	1	4	1	1	3	9	1	1	11
Diarrhea and Enteritis	....	....	....	2	2	8	9	7	26	23	22	46	117	29	19	165
Congenital Malformation	37	21	14	19	91	9	12	4	116	12	10	17	155	8	5	168
Congenital Debility	11	6	8	9	34	15	10	6	65	16	8	15	104	3	2	109
Premature Birth	237	103	31	61	432	28	14	13	487	11	3	2	503	1	....	504
Injury at Birth	102	34	13	21	170	5	....	2	177	....	....	2	179	1	....	180
Other Diseases of early infancy	31	12	7	12	62	7	2	....	71	1	....	1	73	....	....	73
Ill defined	5	7	4	16	32	9	12	6	59	11	11	25	106	25	13	144
Unknown	1	1	1	1	4	1	....	....	5	....	1	3	9	1	2	12

A NEW PROCEDURE IN MILK-BORNE OUTBREAKS

By Millard Knowlton

One of the interesting things about communicable disease control is that new knowledge may be gained at any time which will require modification of preventive procedures. A recent experience with milk-borne scarlet fever illustrates this point. A circular letter to health officers sent out on June 14, 1928 discusses this subject which appears to be of sufficient general interest to warrant reproducing the letter herewith. It reads as follows:

Recent experiences have indicated the advisability of modifying somewhat the procedure in handling milk-borne outbreaks of scarlet fever and septic sore throat. Heretofore the procedure has been based upon the idea that streptococci of human origin are not pathogenic for cows and that streptococci of bovine origin are not pathogenic for man. Information gained in a study of two recent outbreaks has changed this view.

A milk-borne outbreak of scarlet fever occurred last winter in Unionville. While investigating the outbreak it was learned that the man who milked the cows had a sore throat a few days before the outbreak started and one of the cows in the herd was found to have a mastitis at the time of the investigation. From the milk produced by this cow, from the throat of the handler and from the throats of patients there were isolated haemolytic streptococci which were identified as the streptococcus of scarlet fever. The new point is that a cow may become infected by the scarlet fever streptococcus and that this germ may be discharged into the milk and carried to consumers. While studying this outbreak it was learned that others have had a similiar experience, and a paper on the subject was published in the Journal of Experimental Medicine for June, 1928.

In another milk-borne outbreak of scarlet fever which occurred in Avon last month, a haemolytic streptococcus was isolated from the milk of one of the cows which appears to be the streptococcus of scarlet fever. This is the second milk-borne outbreak of scarlet fever in Connecticut since the first of the year in which udder infection with the scarlet fever streptococcus has been found in a member of the herd supplying the milk.

The new procedure indicated by this experience is that when epidemiological evidence points to a milk supply as the probable source of a scarlet fever outbreak, the sale of milk should be stopped immediately unless arrangements can be made for proper pasteurization. Heretofore on some occa-

sions a change of handlers has been regarded as an ample safeguard against further spread of a milk-borne infection. If a person suffering from a scarlet fever sore throat has been handling milk, a change to a healthy handler would eliminate this source of infection, but it would not eliminate the cow that might have become infected from the diseased milker. Such a cow would continue to pour forth scarlet fever streptococci into the milk. The only safe procedure under such circumstances would appear to be to stop the sale of raw milk until the cows can be examined for the germ causing the outbreak. The same procedure should be followed in milk-borne outbreaks of septic sore throats and diphtheria. As typhoid bacilli are not known to be carried by a cow a change of handlers in a milk-borne typhoid outbreak may be permissible.

Representatives of this department are available at all times to assist local health officers in the study and control of milk-borne outbreaks. The Department of Domestic Animals has been very good to supply upon request a veterinarian for the examination of cows in a herd under suspicion. A new and simple milk test that can be applied in the barn is of great assistance in promptly identifying infected cows. This presumptive test is later confirmed by more elaborate tests made in the laboratory. We are in position to bring all of these services to your assistance in dealing with a milk-borne outbreak.

It is difficult to decide what to do with cows infected with scarlet fever streptococcus. No one knows how long such a cow may remain infectious. The cow involved in the first outbreak reacted to the tuberculin test and was slaughtered. The cow responsible for the second outbreak was kept under observation for nearly two months during which time the infected quarter became useless. The owner was given permission to sell her for beef so as to remove this source of danger from his herd. Infection may be carried from such a cow to other members of the herd by the milker. Slaughtering for beef would appear to be a satisfactory solution of the problem.

HANDY POINTS FOR CAMPERS TO KNOW*

By Warren J. Scott

About this time of year, campers old and young are beginning to make plans for the coming summer. They take out their maps, consult their friends about choice camp location, and get out their equipment for a general overhaul.

Directors of established camps are visiting the camps to get things in shape for the summer visitors. Mothers and fathers may be either looking over the prospectuses issued by the owners of private camps or they may be listening to the children talking over their plans for attendance at Boy or Girl Scout or "Y" camps.

The State Department of Heath has come into close touch with camps and campers through its inspection work. Each summer one or two inspectors, as funds permit, endeavor to check up on the sanitary features of all the camps in Connecticut except private family camps. These include "Y" and Scout camps, religious camps, and profit camps, serving all the way from very young children to adults. Where insanitary or unhealthful conditions are found, the authorities are notified to correct them. This they are usually entirely willing to do except that in some cases their funds for carrying out improvements are limited. Campers and parents of young campers should remember that although there is no form of vacation more beneficial than camping in the open with the beauties of nature, yet there are potential health dangers, too, and a knowledge of some information along this line is just as important as knowing how to pitch your tent.

As we are thrown in close contact with other human beings, we are continually exposed to the possibility of having disease transmitted to us from sick persons—not only persons who feel sick but those who may be in the incipient stage of some disease. Therefore, if you are sending Bill or Mary to a camp this summer, it would be well to inquire whether all the children attending the camp are given a physical examination by a doctor before acceptance at the camp. Children are especially susceptible to many communicable diseases and one sick child at a camp can cause a disastrous summer for many. A camp, too, should have arrangements for visits from a doctor, when necessary.

One of the things that should be kept in mind by the camper, whether he is on the hike or ensconced at one location, is the character of the water supply that he uses. Remember that clear, sparkling water is not necessarily free from suspicion. There is nothing more attractive than a clear sparkling

*Radio talk broadcast over W. T. I. C. July 4, 1928.

stream and in the original gift of nature, there is nothing more pure. But upstream on this same clear brook may be other campers, fishermen, or picnickers, or even permanent residents, who are careless about their wastes disposal and the brook may be contaminated by intestinal germs. If this person contributing pollution should be a typhoid carrier—an apparently well person who carries typhoid germs in his intestinal tract—the water may be a dangerous beverage, no matter how refreshing it may seem on a hot day. These deadly bacteria cannot be seen unless isolated and cultivated under laboratory methods. The water may look entirely clear.

In general, water from a running stream should always be looked on with suspicion, unless subjected to a long period of storage or treatment. The automobile now-a-days takes people almost everywhere and one never knows when some careless person may introduce pollution into a stream. There are, of course, some small streams from uninhabited areas where the danger is relatively remote, but it is best to be sure.

The vast majority of permanent camps secure water from wells or springs. Wells or springs should preferably not be located on lower ground than surrounding sources of pollution as privies, cesspools, manure or septic tank drainage,—and never on a direct slope from them. It is impossible to set arbitrary safe distances of separation, as this depends on so many factors, but the greater the distance, the better. The sides of wells should be laid in cement for a distance of about 5 feet below the ground and the walls brought up six inches or a foot above the ground to shut out surface wash. Tight covers, preferably of concrete, are the best form of protection. Bucket and chain wells are picturesque but insanitary. Buckets are handled and may introduce pollution in the water. The use of hand pumps will obviate this danger. Otherwise pure springs are often contaminated by dipping all sorts of utensils into them. Often it is possible to insert an overflow pipe in the side wall and secure water at this overflow.

The best thing to do on hiking trips is to carry your water in a thermos container filled from a source that you know is safe—perhaps a public water supply or your permanent camp supply. Roadside water supplies on state highways, which bear signs erected by joint cooperation of the State Highway Department and the State Health Department, can be used with safety. The next best precaution, if you have to use water from a questionable source, is to boil the water for five minutes. Water may also be disinfected with chloride of lime, as follows:

One level teaspoonful of fresh chloride of lime can be added to a teacupful of water. Dilute this solution with three

cupfuls of water. Mix. Add a teaspoonful of the diluted solution to each two gallon pailful of drinking water. Mix and let stand for ten minutes.

One drop of tincture of iodine per quart of water allowed to stand 30 minutes is also an effective disinfectant. Iodine in large amounts, however, is poisonous and it would probably be best to resort to boiling or chlorination for disinfection.

In connection with drinking and washing facilities, do not forget the dangers of disease transmission from the use of the common drinking cup and the common towel.

The hiker should remember the Golden Rule and be careful not to cause any pollution of streams which are tributary to public water supplies and near which may be warning signs to this effect.

Improper sewage disposal at a permanent camp frequently results in a distinct health menace to the campers themselves as well as those about them. Exposure of material where it is accessible to flies should be avoided by making outside toilets fly-tight. Locations for sewage facilities should, of course, be chosen so that they will not affect camp drinking water supplies or bathing ponds.

The tendency in camps now-a-days, especially those camps which are operated for profit, is to provide in the camps most of the sanitary facilities which are available in the cities. This includes the furnishing of water under pressure by use of a power pump drawing water from a well or other source of supply. With the installation of a water pressure system frequently comes the installation of water flush toilets. If such elaboration is to be provided in a camp, it should be ascertained that proper facilities can be furnished for disposal of the sewage. Either porous soil must exist on the site of the camp so that the drainage will seep away in the soil after sedimentation in a tank, or complete treatment including artificial sand filtration may be necessary before discharge into a watercourse. Approval of the State Department of Health must be secured before discharging any drainage into a watercourse.

It may be more sanitary in some locations where water carriage disposal is difficult, to install the old-fashioned outdoor system of disposal which can be carried out in a perfectly safe and sanitary manner. Even in this case, however, disposal of sink water from a large camp may be a serious problem, so that this, too, should have careful consideration.

It is difficult to understand why campers and picnickers are so inconsiderate of others as to strew the countryside with refuse. Piles of garbage furnish breeding places for flies and and food for rats. Flies may transmit disease by depositing

disease germs on food and elsewhere. Empty cans may accumulate rain water and breed mosquitoes. In addition to such refuse material which may through improper disposal affect healthful living conditions, there is the waste paper and other refuse which detracts from the appearance of beautiful camp sites and makes blots on the countryside. It requires little time and effort to bury this material or with due regard to the possible dangers of setting damaging fires, to burn it. Large camps sometimes contract with farmers to call for the kitchen refuse and transport it away for feeding to animals.

Milk supplies for campers should also receive consideration. Frequently camps are located in places where it is impossible to secure milk that is pasteurized to destroy harmful bacteria as is the case with the majority of our milk supplies in the cities, although some camps transport pasteurized milk for considerable distances. It is, therefore, desirable that camp milk supplies be obtained from herds that are tuberculin tested and from dairies that are maintained in sanitary condition.

With the growth of our cities and concentration of population, increasing amounts of pollution are discharged into our state waterways. Although the state is constantly working to reduce this pollution load, yet some of our streams are subject to considerable or large amounts of pollution. Bathing in polluted streams is potentially dangerous and camp locations should be chosen with due regard to this fact.

Connecticut is a natural camping ground—not only for its own citizens but for other populous neighboring states. New York City sends thousands of campers each year. The foothills of the Berkshires with the scattering of attractive lakes, the hills in the vicinity of Pomfret and surrounding towns, the valleys of numerous sparkling streams over the state, and the beauties of the shore of Long Island Sound, all contribute to the lure of Connecticut as a camping ground.

The camping habit is growing. The automobile is one factor. The congestion in our large cities is another. Camping should be a great benefit to health. However, it is better by far to stay in the city with public sanitary conveniences under supervision than to be exposed to health dangers in camps because of the negligence of campers or camp authorities. A happy balance with the utmost benefits to health can be preserved only by realization on the part of the campers as to the health hazards to be avoided, together with due thought on the part of parents as to the camps chosen for their children and care on the part of camp directors to avoid all conditions dangerous to health.

YOUR CHILD IS WHAT YOU MAKE HIM
EVADING ISSUES

By Winifred W. Arrington, A.B., M.S.S., Division of Mental Hygiene

THIS CHILD finds that tantrums help him to escape disagreeable situations.

This child's **PARENTS** fail to see that they are letting him evade difficulties.
They may give him unreasonable and contradictory commands.
They may neglect to keep their promises.
They may threaten punishment that never materializes.
They may bribe their child to be good, or nag him.
They may shield him before others, even in wrongdoing.
They may not answer his questions with facts.
They may evade their own obligations and set a wrong example.

Evasion Always A Mistake

There are three ways, says an eminent psychiatrist, to meet unpleasant experiences; the first is to run away from them (physical retreat); the second is to hide from them (mental retreat); and the last is to stand ground and to attack them.

Celia B. was one of those who chose mental retreat. Celia was a plain girl with a manner that was timid and colorless.

In her work as file clerk she was clumsy, and at home she had long been the least considered member of the family. Like other naturally drab people, she had always unconsciously resorted to the dramatic to make herself felt. Her imagination teemed with achievements to which, in real life, she was never equal. But even the dramatic had begun to fail her. Her self-esteem was unsatisfied and hungry for notice.

Then came the morning when she could not walk. Her right leg seemed paralyzed. Reflecting on her fresh misfortune, Celia, like everyone else, was alarmed. Yet, as time passed, she could not help being gratified by the concern that was showered on her. It was no mean distinction to be the object of doctor's visits and to be solicitously waited upon by relatives who ordinarily ignored her existence. The new handicap had its compensations for it transported her suddenly to the center of the stage.

Hysteria—Mentally Evading Issues

What had happened? The psychiatrist explained when, at the suggestion of the family physician, he was summoned. Celia had stumbled upon a way to be temporarily at peace with her problem. In scientific terms she was a victim of **hysteria,** a mental phenomenon which consists in evading issues. Her paralysis was not actual but functional. Nor was Celia consciously pretending. She had attempted mental retreat, and the crippled leg was an **unconscious** trick of her mind; upon it had been shed the burden of earning her attention which should have been won by frank struggle with her obstacles. Only disaster could come of evasive tactics like these, said the psychiatrist, for they meant desertion of real life.

With the psychiatrist's help, Celia began to see that her life was full of petty evasions. She had always excused herself from parties and by pleading headaches and previous engagements, she had managed to play hide-and-seek with all other social contacts that she dreaded. The family remembered that, as a young child, she had the habit of throwing herself on the floor, kicking, screaming, and holding her breath when punishment was due, or when her teasing for privileges proved ineffectual. Even as an adult she was noted for making "scenes." All these things were pretexts for shirking the unpleasant. Had they ultimate value, there might have been reason for clinging to them, but they simply tided over the immediate situation, and increased the fear of situations to follow. Like a drug, they had exacted greater dependence with each indulgence.

In the outcome there was a tardy lesson for Celia's parents. It was they, the psychiatrist found, who had first influenced her to sidestep the straight demands of life. In her childhood they had not been firm in their commands. They had allowed her to see that coaxing and tantrums could make them submit. Since their attitude toward her had varied with their moods, they had shown her a world which could be manipulated. Perhaps they had even set a direct example of evasion by shirking obligations, giving roundabout answers, or making dramatic temper displays of their own. They had been her teachers in the art of mental retreat.

Temper tantrums are weather vanes which show in what direction the child's personality is tending. Parents who yield to them give the child a false idea of life values. They encourage him to circumvent facts and since the facing of facts is a cardinal principle of mental health, they predispose him to mental disorder.

Laboratories

SUMMARY OF BUREAU ACTIVITIES

JUNE, 1928

	DIAGNOSTIC					
	+	—	?	Unclassified	Specimens	Examinations
Typhoid	5	173	2	....	166	180
Paratyphoid A	....	180	....	....	....	180
Paratyphoid B	7	173	....	....	....	180
Diphtheria	50	694	....	....	380	744
Diphtheria Virulence	7	24	....	....	27	31
Vincent's Angina	5	576	....	....	2	581
Hemolytic Streptococci	....	579	....	....	....	579
Tuberculosis	25	182	....	....	200	207
Syphilis	662	3034	100	....	2718	3796
Gonorrhea	45	75	....	....	120	120
Pneumonia	1	1	....	....	2	2
Malaria	....	2	....	....	2	2
Rabies	3	1	....	....	4	4
Special Specimens	4	13	2	62	23	81
					3644	6687

CHEMICAL AND BACTERIOLOGICAL		
Milk samples	446	446
Cream samples	2	2
Water samples	455	455
Sewage samples	189	189
Trade waste samples	17	17
Clinical thermometers	838	838
Totals	5591	8634
Total laboratory procedures		19937

Comparison of Past Three Years—Figures Tell the Tale

During the first six months of the calendar year of 1928 a total of 52,132 examinations were made. This figure is 4,362 larger than that for the first six months of the year 1927 and 16,794 more than the figure for the same period of 1926.

Vital Statistics

MONTH OF MAY

Totals for the First Five Months of the Year, 1926, 1927, 1928

Year	Births	Birth Rate*	Marriages	Mar. Rate*	Deaths	Death Rate*
1926	12,291	18.9±.1	3,795	5.8±.1	8,757	13.6±.1
1927	12,092	18.3±.1	3,866	5.8±.1	7,657	11.5±.1
1928	11,475	17.0±.1	3,218	4.7±.1	8,177	12.1±.1

*Per 1,000 population, annual basis

A glance over the figures above will show that the births have steadily declined during the last three years. Last month, the rate for 1927 was 17.1, and this month it is even lower, at 17.0. With a continued low marriage, it is to be expected that the birth rate will continue low. And the marriage rate for 1928 is so much lower that it was in 1927 and 1926 that the decrease cannot be regarded as normal.

It will appear later in this review that 1928 saw a marked increase in deaths as far as May is concerned. The accumulated rate is 12.1 per 1,000 of the population, and this increase in rate now makes it appear that 1928 will not eclipse the record low death rate established in 1927. Up to this month there was that possibility. While the rate shows a marked increase over 1927, it is far from a high death rate.

Births

The department received reports of 2,256 birth certificates, a total 217 less than the 2,473 reported in 1927. The monthly rate was 16.8, a low rate, but not as low as the rate last month, when 16.1 appeared. The rate, however, is by far the lowest to appear in the last six years.

The towns of over 5,000 population number 50 in 1928. Of these towns 25 reported more births in 1928 than in 1927, for May. But of these 25 increases only two were for 10 or more, namely—

New London ..... 14±9 West Hartford ..... 14±8

These increases will be seen to be of no significance from a purely mathematical point of view.

Records of 84 stillbirths were received, making a total of 2340 births. These 84 stillbirths appeared therefore at the rate of 35.9±4.0 per 1,000 total births. A year ago there were 94 stillbirths among a total number of births of 2,567. Or the rate was 36.6±3.7. The rate for 1928 is therefore somewhat lower than in 1927 and will be even lower when

late birth certificates are received. As regards sex of the stillbirths, 54 were males and 30 females to give a sex ratio of 180 males to 100 females. The ratio for May, 180 to 100, is very high.

Deaths

The month saw a substantial increase in the number of deaths, 1749 being reported as compared with 1456 in 1927, an increase of 293. This is the largest number of deaths to be reported for May in the past six years, and the increase in population from year to year is not enough to offset the increased rate. The rate of 13.0 is definitely higher than in any year in the last six years. As the year is now 520 over the deaths reported in 1927, it will have to be by an exceptional experience of mortality that 1928 will equal the record of 1927. A month ago the outlook for 1928 was very bright. The increase of 293 has somewhat clouded the view, but there is still a chance. If the favorable months are a bit more favorable than usual—and after a relatively heavy mortality this frequently happens—then 1928 may equal 1927.

To show the month of May, comparing 1928 with 1927, the following table has been compiled, for a selected list of causes of death:

Cause of Death	1928	1927	Increase	Decrease
Typhoid fever	0	0	....	....
Measles	13±4	0	13±4	....
Scarlet fever	6±2	2±1	4±3	....
Whooping cough	10±3	3±2	7±4	....
Diphtheria	6±2	4±2	2±3	....
Influenza	98±10	27±5	71±11	....
Poliomyelitis	1±1	0	1±1	....
Epidemic encephalitis	0	1±1	....	1±1
Cerebrospinal meningitis	2±1	0	2±1	....
Tuberculosis, pulmonary	84±9	89±9	....	5±13
Tuberculosis, other forms	14±4	16±4	....	2±5
Cancer	116±11	137±12	....	21±16
Diabetes Mellitus	22±5	30±5	....	8±7
Disease of the heart	139±12	252±16	....	113±20
Pneumonia, broncho	133±12	55±7	78±14	....
Pneumonia, lobar	112±11	58±8	54±13	....
Pneumonia undefined	6±2	3±1	3±3	....
Diarrhea and enteritis under 2	6±2	8±3	....	2±4
Nephritis	116±11	106±10	10±15	....
Puerperal diseases	12±3	14±4	....	2±5
Suicide	24±5	18±4	6±6	....
Accident	98±10	87±9	11±14	....
Other causes	731±27	546±23	185±35	....
Total	1749±42	1456±38	447	154

In the first place, examining the increases there are some surprising figures. Measles is evidently present in far more than random sprinkling. The increase is very definite.

Whooping cough is on the borderline of significance. And influenza came with a rush, to give an increase of such an extent to make the worker in public health give pause. In association with the increase in influenza there was marked increase in both broncho and lobar pneumonia. In the bulletin of last month, it was noted that there was an increase in the pneumonias but a decrease in the influenza. That has been more than offset now!

Of the decreases, one in particular is very extraordinary and tremendously significant from a statistical point of view—namely the decrease in diseases of the heart. Were it not for the fact that **any** decrease in deaths from cancer is encouraging, the decrease of 21 ± 16 would not be mentioned as apparently it is but a chance phenomenon. In the present state of our knowledge of the disease, this decrease can hardly indicate progress. Of the accidental deaths, 37 were due to the automobile. The record a year ago was 26.

To compare the totals to date of certain diseases, the following accumulative table is presented. It comprises the first five months of 1928 and 1927.

Cause of Death	1928	1927	Increase	Decrease
Typhoid fever	6	5	1	....
Measles	34	14	20	....
Scarlet fever	14	14	....	....
Whooping cough	45	25	20	...
Diphtheria	45	32	13	....
Influenza	236	213	23	....
Poliomyelitis	4	1	3	....
Epidemic encephalitis	10	7	3	....
Cerebrospinal meningitis	6	4	2	....
Tuberculosis, pulmonary	437	448	....	11
Tuberculosis, other forms	59	59	....	....
Cancer	685	694	....	9
Diabetes Mellitus*	*	*		
Diseases of the heart	1153	1290	....	137
Pneumonia, broncho	486	341	145	....
Pneumonia, lobar	557	431	126	....
Pneumonia, undefined	19	10	9	....
Diarrhea and enteritis under 2 ..	38	53	....	15
Nephritis*	*	*		
Puerperal diseases	82	77	5	....
Suicide	101	81	20	....
Accident	418	413	5	....
Total	4435	4212	395	172

*Not available

The list of increases is rather formidable. Of course the most startling is the increase in the pneumonias. Note the fact, measles may, and freqently does, cause considerable mortality. Also whooping cough.

The decrease in deaths due to diseases of the heart is very encouraging, as is also the decrease in deaths due to diarrhea and enteritis under 2.

FOR SIX YEARS—MAY, 1928

CONNECTICUT	1923	1924	1925	1926	1927	1928
BIRTHS	2670	2760	2574	2587	2473	2256
Birth Rate	21.7	22.0	20.2	19.9	18.7	16.8
DEATHS	1472	1342	1493	1568	1456	1749
Death Rate	12.0	10.7	11.7	12.1	11.0	13.0
MARRIAGES	920	931	862	891	864	664
Marriage Rate	7.5	7.4	6.8	6.9	6.5	4.9
COMMUNICABLE DIS.* DEATHS	194	155	158	201	125	220
Per Cent to Total Deaths	13.2	11.5	10.6	12.9	8.9	12.6
DEATHS UNDER 1 YEAR	169	175	186	194	124	169
Rate Per 1,000 Births	65.8	66.1	74.9	80.6	52.3	71.1

*Includes Typhoid Fever, Measles, Scarlet Fever, Whooping Cough, Diphtheria, Tuberculosis Pulmonary, Cerebrospinal Meningitis, Poliomyelitis, Influenza.

Births, Marriages and Deaths

Statistics

May, 1928

State of Connecticut	Population Est. as of July 1, 1928 Based on U. S. Census	TOTALS				DEATH RATES			Typhoid Fever (1)	Measles (7)	Scarlet Fever (8)
		Births	Stillbirths	Marriages	Deaths	Deaths under 1 year	All Causes (per 1,000 pop.)	Children under 1 year (per 1,000 births)			
	1,613,874	2256	84	664	1749	169	13.0	71.1	.....	13	6
Ansonia	19,805	28	.....	10	13	.....	7.9	.....	.....	.....	.....
Branford	7,133	13	.....	3	11	2	18.5	235.2	.....	.....	.....
Bridgeport	179,163	223	11	62	147	15	9.8	57.6	.....	3	.....
Bristol	26,820	65	2	9	26	5	11.6	93.0	.....	.....	.....
Danbury	21,931	35	2	11	38	2	20.8	41.6	.....	.....	.....
Derby	13,194	10	2	3	17	.....	15.5	.....	.....	.....	.....
East Hartford	14,311	27	.....	.....	17	1	14.3	90.2	.....	.....	.....
East Haven	5,030	5	.....	.....	12	2	28.6	274.4	.....	1	.....
Enfield	13,445	23	1	3	8	.....	7.1	.....	.....	.....	.....
Fairfield	16,091	15	.....	1	16	1	11.9	88.2	.....	.....	.....
Glastonbury	6,288	7	.....	2	8	1	15.3	226.4	.....	.....	.....
Greenwich	26,956	37	2	40	31	3	13.8	78.3	.....	.....	.....
Groton	11,607	18	.....	4	13	1	13.4	95.2	.....	.....	.....
Hamden	11,002	20	1	2	17	2	18.5	183.2	.....	.....	.....
Hartford	172,288	258	6	56	193	24	13.4	69.1	.....	4	.....
Killingly	9,517	19	1	9	14	2	17.7	138.0	.....	.....	.....
Manchester	22,478	21	.....	6	23	1	12.3	29.5	.....	1	.....
Meriden	37,085	52	4	14	51	6	16.5	91.2	.....	1	.....
Middletown	23,000	31	1	7	27	2	14.1	39.2	.....	.....	.....
Milford	15,273	13	2	5	16	.....	12.6	.....	.....	.....	.....
Naugatuck	17,069	25	1	14	14	2	9.8	233.0	.....	.....	.....
New Britain	72,654	95	2	41	67	10	11.1	76.5	.....	.....	.....
New Haven	187,705	268	15	91	209	19	13.4	64.0	.....	2	.....
New London	30,770	45	2	13	27	2	10.5	32.0	.....	.....	.....
Norwalk	30,537	36	2	13	30	3	11.8	52.2	.....	.....	1
Norwich	30,762	48	2	16	43	7	16.8	116.2	.....	.....	.....
Plainfield	8,909	13	.....	4	15	1	20.2	95.2	.....	.....	.....
Plainville	5,191	10	.....	.....	6	1	13.9	214.3	.....	.....	.....
Plymouth	6,554	8	1	2	6	1	10.9	151.8	.....	.....	.....
Putnam	9,334	12	1	8	11	1	14.1	60.0	.....	.....	.....
Seymour	8,526	9	.....	5	4	1	5.6	190.4	.....	.....	.....
Shelton	12,000	16	.....	2	4	1	4.0	101.7	.....	.....	.....
Southington	10,123	10	1	6	15	2	17.8	179.2	.....	.....	.....
Stafford	5,490	11	.....	3	3	.....	6.6	.....	.....	.....	.....
Stamford	49,923	98	2	25	52	6	12.5	59.0	.....	.....	.....
Stonington	11,152	17	.....	7	12	1	12.9	79.5	.....	.....	.....
Stratford	17,451	27	.....	5	20	2	13.8	131.2	.....	.....	.....
Thompson	5,252	12	.....	3	6	1	13.7	134.8	.....	.....	.....
Torrington	25,453	39	1	6	26	3	12.3	77.7	.....	.....	.....
Vernon	8,751	13	2	4	11	.....	15.1	.....	.....	.....	.....
Wallingford	12,747	17	.....	5	25	1	23.5	123.7	.....	.....	.....
Waterbury	107,908	139	8	40	100	15	11.1	87.3	.....	.....	.....
Watertown	7,732	9	.....	3	8	.....	12.4	.....	.....	.....	.....
West Hartford	12,763	41	.....	2	15	1	14.1	79.5	.....	.....	.....
West Haven	19,334	30	1	5	11	1	6.8	34.2	.....	1	.....
Westport	5,862	10	.....	2	4	1	8.2	428.6	.....	.....	.....
Wethersfield	5,387	4	.....	3	3	.....	6.7	.....	.....	.....	.....
Winchester	9,144	17	1	2	6	1	7.9	71.9	.....	.....	.....
Windham	14,509	21	.....	8	18	3	14.9	124.2	.....	.....	.....
Windsor	6,880	9	.....	.....	11	2	19.2	436.2	.....	.....	.....
Other States		17	.....	.....	28	2	.....	.....	.....	.....	.....
Towns under 5,000	205,585	210	7	79	241	8	14.1	.....	.....	.....	5

DEATHS FROM IMPORTANT CAUSES

Whooping Cough (9)	Diphtheria (10)	Influenza (11)	Poliomyelitis (22)	Epidemic Encephalitis (23)	Meningitis Cerebrospinal (24)	Tuberculosis-Pulmonary (31)	Tuberculosis-Other Forms (32-37)	Cancer (43-49)	Diabetes Mellitus (57)	Diseases of the Heart (87-90)	Pneumonia-Broncho 100 (1)	Pneumonia-Lobar 101 (1)	Pneumonia-undefined 101 (2)	Diarrhea and Enteritis under 2 (113)	Nephritis (128-129)	Puerperal Diseases (143-149)	Suicide (165-174)	Accident (175-189)
10	6	98	1	.....	2	84	14	116	22	139	133	112	6	6	116	12	24	98
.....	.....	.....	.....	.....	.....	2	.....	1	.....	2	.....	4	.....	.....	.....	.....	.....	1
.....	.....	1	.....	.....	.....	1	.....	2	.....	1	.....	.....	.....	.....	2	.....	.....	1
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Preventable Diseases

INCIDENCE OF DISEASE FOR MONTH OF JUNE, 1928

(As compared with previous years)

A comparison of the daily morbidity reports received during the month of June, 1928, with the corresponding month for the years 1923, 1924, 1925, 1926 and 1927.

	Average 1923-1927 for June	Mean 1923-1927 for June	1923	1924	1925	1926	1927	1928
Cerebrospinal meningitis	3	4	5	2	1	5	4	7
Diphtheria	112	122	136	111	122	53	138	74
Encephalitis epidemic	5	6	6	7	6	2	4	2
Measles	796	556	556	512	1049	1612	252	1408
Poliomyelitis	1	1	....	2	1	....	1	3
Scarlet fever	268	277	230	341	180	314	277	145
Smallpox	3	2	3	8	....	2	....	5
Typhoid fever	10	9	9	12	14	9	5	4
Tuberculosis, pulmonary	140	137	137	128	136	149	150	162
Whooping cough	211	165	262	74	458	165	98	492

A comparison of the morbidity of these diseases for the two preceding months, April, 1928, and June, 1928, with the June 1928 record is as follows:

	Apr. 1928	May 1928	June 1928
Cerebrospinal meningitis	6	7	7
Diphtheria	103	98	74
Encephalitis epidemic	1	4	2
Measles	1476	1472	1408
Poliomyelitis	....	....	3
Scarlet fever	291	384	145
Smallpox	....	11	5
Typhoid fever	6	4	4
Tuberculosis pulmonary	122	145	162
Whooping cough	441	446	492

Cases of Certain Other Reportabe Diseases

Chickenpox	204	Smallpox	5
Encephalitis epidemic	2	Tetanus	3
German measles	117	Ophthalmia neonatorum	3
Influenza	19	Gonorrhea	122
Malaria	1	Syphilis	222
Mumps	349		
Paratyphoid fever	1	Total	1050
Septic sore throat	2		

Cases of Occupational Diseases

Chromium poisoning	1	Mercury poisoning	6
Conjunctivitis	18		
Lead poisoning	1	Total	26

Cases of Certain Reportable Diseases

June, 1928	Population Est. as of July 1, 1927	Typhoid Fever	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Meningitis Cerebrospinal	Poliomyelitis	Tuberculosis Pulmonary	Tuberculosis Other Forms	Pneumonia Lobar	Pneumonia Broncho-	Other Com. Diseases
State Total	**1,613,874**	**4**	**1408**	**145**	**492**	**74**	**7**	**3**	**162**	**32**	**116**	**106**	**1050**
NEW HAVEN CO.	**483,603**		**391**	**17**	**153**	**12**	**2**		**65**	**25**	**30**	**14**	**310**
New Haven	187,705		106	2	64	5			39	24	9	1	194
Waterbury	107,908		53	6	5	3	1		9	1	7	2	20
Meriden (city and town)	37,085		13	1	16				2		4	5	40
Ansonia	19,805												3
West Haven	19,334		3	2	4		1		13		2	1	12
Naugatuck	17,069												
Wallingford (town and boro)	12,747												
Milford	15,273		21	1	5	1						1	3
Derby	13,194		2									2	4
Hamden	11,002		99	2	46	3					7		24
Branford (town and boro)	7,133												
Seymour	8,526			2					1				1
Towns under 5,000	21,792		94	1	13				1		1	2	9
FAIRFIELD CO.	**387,138**		**299**	**34**	**117**	**25**	**2**	**1**	**28**	**4**	**28**	**23**	**270**
Bridgeport	179,163		67	6	24	19			17	4	17	19	37
Stamford (city and town)	49,923		41	4	13	1			2		1		42
Norwalk	30,537		32		6	2						1	10
Danbury (city and town)	21,931		1	2	1	1					2		6
Greenwich (town and boro)	26,956		49	12	42	1			2		4	1	127
Stratford	17,451		3	3	1	1		1	2			1	1
Fairfield	16,091		41	1	8		1				3		1
Shelton	12,000		18	2					1				25
Westport	5,862		11										1
Towns under 5,000	27,224		36	4	22		1		4		1	1	20
HARTFORD CO.	**411,342**	**2**	**486**	**38**	**135**	**24**	**1**	**2**	**42**	**3**	**39**	**56**	**314**
Hartford	172,288		248	13	31	15			27		19	33	149
New Britain	72,654		46	4	37	3		1	4	2	5	3	65
Bristol (city and town)	26,820		1	3	24	1			7	1	2	1	13
Manchester	22,478		17	1	5	1					3	7	2
Enfield	13,445	2	1	1	2				1			2	2
East Hartford	14,311		7			1			1		2	2	4
Southington (town and boro)	10,123		1	1					1		1		3
West Hartford	12,763		57	7	16	1	1				4	1	16
Windsor	6,880		12		1							1	9
Glastonbury	6,288												
Wethersfield	5,387		5	2	1							1	1
Plainville	5,191												2
Towns under 5,000	42,714		91	6	18	2		1	1		3	5	48
NEW LONDON CO.	**116,306**		**53**	**17**	**30**	**1**	**1**		**9**		**2**	**6**	**53**
Norwich (city and town)	30,762		4	8		1			2				5
New London	30,770		4		1		1		2		1	3	9
Stonington (town and boro)	11,152		11	4							1	1	5
Groton (town and boro)	11,607		19		17				1			1	
Towns under 5,000	32,015		15	5	12				4			1	34
LITCHFIELD CO.	**81,518**		**28**	**13**	**15**	**2**	**1**		**5**		**4**		**20**
Torrington (town and boro)	25,453			6					1				1
Winchester (inc. Winsted)	9,144			3					1		1		
Plymouth	6,554			2					1		1		6
Watertown	7,792						1		1		1		1
Towns under 5,000	32,635		28	2	15	2			1		1		12
WINDHAM CO.	**56,717**		**89**	**11**		**2**			**4**		**1**	**3**	**27**
Windham (inc. Willimantic)	14,509		4	5					1		1	2	3
Putnam (city and town)	9,334		49			1							13
Plainfield	8,909												
Killingly (inc. Danielson)	9,517		9	2					2				9
Thompson	5,252		17			1						1	1
Towns under 5,000	9,196		10	4					1				1
MIDDLESEX CO.	**49,372**	**2**	**46**	**6**	**32**	**7**			**7**		**9**	**3**	**27**
Middletown (city and town)	23,000	2	13			2			4		1	3	16
Middletown State Hospital									1				
Towns under 5,000	26,372		33	6	32	5			2		8		11
TOLLAND CO.	**27,878**		**16**	**9**	**10**	**1**			**2**		**3**	**1**	**29**
Vernon (inc. Rockville)	8,751								1				
Stafford (town and boro)	5,490		9	3					1		3		2
Towns under 5,000	13,637		7	6	10	1						1	27

VACATION GUIDE POSTS

Take New Sports with Slow Speed—Changing Gears when Accustomed to the New Activity

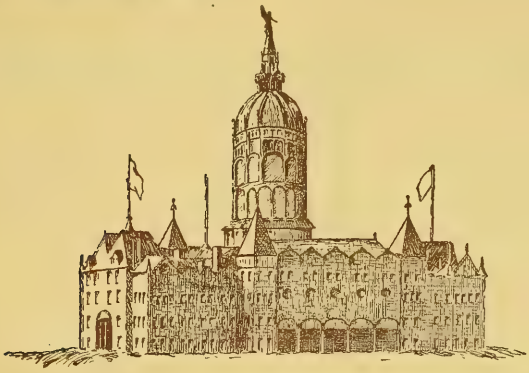
Rest and Relaxation Make for Smooth Running of the Human Motor

Enough Well Selected Food Fuel will Avert a Breakdown on the Road

Pure Safe Water Should be Secured at Safeguarded Places

Be Friendly Along the Way—Courtesy Counts

Library, Hygienic Laboratory,
25th & E. Sts., N.W.,
Washington, D.C.



Connecticut Health Bulletin

"For a Clean State and a Healthy People"

Vol. 42 **August, 1928** **No. 8**

SPECIAL ARTICLES

Final Court Judgment for Unlicensed Persons

Tularemia Now a Reportable Disease in Connecticut

Sanitation of Bathing Beaches

Your Child is What You Make Him—Facing Facts

STANLEY H. OSBORN, M. D., C. P. H., Commissioner

Issued Monthly by the

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HARTFORD

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MONTHLY HEALTH BULLETIN

Vol. 42 August, 1928 No. 8

FINAL COURT JUDGMENT FOR UNLICENSED PERSONS

Two unlicensed physicians, Gerald A. Richardson of Bridgeport, and Bernard I. Kafka of Stamford after having carried their appeals from revocation of their licenses to various courts have once again received the verdict of guilty of unlawfully practicing medicine. Final judgment came through the Supreme Court of Errors, third Judicial district, Fairfield County, Connecticut, where in the April term there was handed down a judgment of guilty, and no errors found in the judgment of the Court of Common Pleas for Fairfield County where the accused had previously been tried.

Both cases having been previously tried to the same courts, only one case at this time, Gerald A. Richardson was tried to the Connecticut Supreme Court of Errors, Bernard I. Kafka having signed a stipulation to be bound by the results of the appeal of Gerald A. Richardson. This final judgment prohibits practice in Connecticut of these two men whose licenses were revoked.

The State of Connecticut has been to much expense and effort in bringing these persons to judgment. Both were found guilty of practicing without a license after their licenses had been revoked by the State Department of Health on advice of the Eclectic Examining Board in 1924 and this was upheld in the local court. Their appeals to the Superior Court were dismissed after which they appealed to the Connecticut Supreme Court where the judgment of the Superior Court was confirmed. Following this they carried their appeals to the United States Supreme Court on the basis of unconstitutionality of the Connecticut law but in October 1926 the United States Supreme Court failed to change their status.

Not satisfied with this judgment they started to practice again and were arrested, tried and lost, then appealed to the Superior Court and their appeals went to the Connecticut State Supreme Court of Errors where the final judgment was handed down in June.

TULAREMIA NOW A REPORTABLE DISEASE IN CONNECTICUT

By action of the Public Health Council of the State Department of Health on July 19, the list of diseases reportable to local health officers has been extended to include two new diseases, undulant fever and tularemia.

The following just released by the United States Public Health Service gives further information about tularemia, the new American disease:

"Gold Medal Awarded Doctor Edward Francis For Work On Tularemia, the New American Disease.

"A gold medal was presented to Dr. Edward Francis, of the United States Public Health Service, Washington, D. C., by the American Medical Association during the meeting recently held in Minneapolis, Minn. The committee on awards considered the research work on tularaemia, a new disease of man, as the most important medical work of the year. Recognizing Dr. Francis as the nation's outstanding authority on this disease which has perplexed science for several years, the commitee, in judging his work on the basis of originality, made the statement that the medal was being awarded to him for his thorough and important scientific contributions to the knowledge of tularemia.

"Tularemia is primarily an epizootic of wild rabbits and is caused by **Bacterium tularense,** which affects the liver and spleen, producing decay of the tissue cells in these organs shown by innumerable white spots from the size of a pin-point to that of a pinhead to be studded over this surface and resulting in death. Of the wild rabbits offered for sale in the Washington, D. C., market Dr. Francis examined the livers of 1,000 and found 10, or one per cent, to be infected with virulent **Bacterium tularense.**

"Man readily innoculates himself with the disease while dressing rabbits, the infection passing from the rabbit's liver through some wound on his hand, resulting in an ulcer on the hand, enlarged glands at the elbow or in the armpit, and fever which confines him to bed for two or three weeks.

"Cooks, hunters, housewives, and market men are often infected in November, December, or January, when, owing to relaxation of game laws, it is permitted to hunt wild cotton tail rabbits for food.

"Persons who skin and cut up jack rabbits for fish bait, coyote bait, fox feed, chicken feed, hog feed, dog feed, or for the market, frequently become infected.

"Tularemia is 'made in America' and has been staged from start to finish by an all-American cast. The discovery of a new disease is an important milestone in medical history. In the history of human medicine there is only one instance in which American investigators alone have discovered a disease of man, isolating its causative agent, determining its sources of infection and its modes of transmission to man, describing its symptomatology and pathology, and otherwise elucidating the many essential problems connected with the complete knowledge of a disease—that instance is the story of tularemia.

"The disease was first discovered in a ground squirrel in Tulare County, California, in 1910, by Dr. G. W. McCoy, of the United States Public Health Service. It became engrafted into the jack-rabbit population of the West, and then, as a disease of wild rabbits and of man it advanced steadily across the Continent, invading state after state until now, in 1928, there remains only a solid block of six uninvaded states composed of the New England group.

"Although a new disease to man, tularemia has now been recognized in 42 states of the United States, in the District of Columbia, and in Japan, but in no other country. Of 614 reported cases, 23 have terminated in death.

"Dr. Francis himself fell a victim to tularemia while studying his first case of the disease in Utah. He is now devoting himself to its prevention and cure.

"Prevention is the key-note of modern medicine. Keep your bare hands out of a wild rabbit—one per cent of them are infected with tularemia. Rabbit meat, thoroughly cooked, is harmless for food, because a temperature of 133°F. kills the infection. Rubber gloves afford complete protection to those who must dress wild rabbits.

"Beware of the wild rabbit which the cat or dog has caught—or which a boy has killed with a club—it is probably a sick rabbit. A warning to the poor sportsman is necessary. He should not shoot the rabbit that is on the point of his gun. Let him take his rabbits on the run at twenty-five feet distant and the chances will be lessened that the rabbits he bags will be sick with tularemia.

"The women of the country are coming to the rescue. They are telling their sportsman husbands to bring home the birds, but to let the rabbits lie as they fall—'Don't bring them home.' The disease is new, but the warning is 5,000 years old. Read Leviticus, chapter eleven, verses four to eight: 'The flesh of the hare shall ye not eat, and its carcass shall ye not touch; they are unclean to you.' "

SANITATION OF BATHING BEACHES*

By Warren J. Scott

The subject of potential dangers from the use of certain bathing beaches in Connecticut and elsewhere has been a moot question. There are so many angles to the situation that I hardly know where to start.

In the first place, it is very difficult to obtain accurate epidemiological evidence as to just what sickness is caused by bathing in polluted water. A rather exhaustive survey by the Committee on Bathing Places of the American Public Health Association was confined mostly to indoor swimming pools. They do report an epidemic of typhoid fever at a boys' camp from bathing in polluted water and many cases of eye, ear, nose and throat infections. Some of this infection might be due principally to lowering of resistance from chills. Ciampoli and Hitchcock in 1923 analyzed a series of 61 cases of typhoid fever occurring during the summer of 1921-1922 and concluded that most of them were due to bathing in polluted waters of New Haven harbor.

We all know that there are many typhoid fever cases that cannot be definitely traced to the source of infection. How many of these cases may be due to infection from polluted bathing water cannot be determined. In considering the danger from bathing in polluted water, it must be remembered that Connecticut, and the country in general, has been favored with a great reduction in typhoid fever. For example, in 1890, the typhoid fever death rate in Connecticut was 41.8 per 100,000 and in 1927, the rate was only 1.1 per 100,000. Better water, food and milk supplies, combined with improved general sanitation, inoculation against the disease, and control over carriers, all have contributed to this result. This great reduction in typhoid cases has reduced to a low degree the infection of the salt water with typhoid germs. On the other hand, the growth in population and extensions of sewerage systems have contributed to an enormous increase in the amount of sewage pollution of our inland and shore waters. Suppose that a bad break of typhoid suddenly occurred in some large shore city during the height of a bathing season, might not this sudden mass infection of the salt water produce a serious catastrophe?

There is still much we do not know as to the possibilities under practical operating conditions, but we do know that bathing in polluted water is potentially dangerous and we know that pollution should be controlled as a public health measure. The next question that arises is; "What is polluted water?"

*Abridged paper read before the Connecticut Public Health Association on June 6, 1928.

Development of Standards

In public health work we have gradually come to adopt certain standards, usually proposed by certain leading scientists and perhaps later changed as a result of experience until they are found to be possible to meet and to be sufficiently stringent to avoid trouble as shown by epidemiological evidence. Our standards for drinking water supplies and milk supplies have been developed in this way. Some of the newer standards proposed have been for swimming pools and other public bathing places. These standards were issued in 1926 by a joint committee of the American Public Health Association and the Conference of the State Sanitary Engineers. This report as it applies to swimming pools is an excellent one. Very little of the report deals with bathing in natural streams, lakes and tidal waters. The report reads, "It is very desirable that the bathing water at public bathing places on natural streams, lakes and tidal waters should be of the same standard of bacterial quality as is required for swimming pools." Theoretically there can be no objection to this statement. Practically, while "it is very desirable," it is utterly impossible in most cases to meet such standards at salt water beaches at the height of bathing seasons with pollution being constantly introduced by bathers, unless the beach is so situated that it is relatively free from pollution and is not overcrowded, or conditions are such that a boat can be used for applying liquid chlorine to destroy pathogenic bacteria.

In the following paragraphs, in comparing figures for content of Bact. coli, there is the difficulty in comparing standards and also bacteriological findings that some are expressed in numbers of tubes in dilutions of 10 c.c., 1c.c., etc., showing positive tests, whereas others are on the basis of actual counts of Bact. coli on eosin-methylene-blue agar or other media. For purposes of rough comparison, an endeavor has been made to transpose the results from dilutions in broth into actual counts. Where readily possible, this has been done in accordance with methods of probability, as presented in the Manual of the American Waterworks Association. It has further been assumed that where dilutions were not carried far enough, the next greater dilution was negative. Where only summaries of figures were available, the assumption has also been made that plus in 1 c.c. and minus in 0.1 c.c. is 100 Bact. coli per 100 c.c., etc. It is realized that such assumptions are arbitrary but as they err in giving better results rather than worse, they will show all the more the difficulty in meeting some of the proposed standards.

The desirable standard proposed by the joint committee is that not more than two out of five 10 c.c. portions of water

shall show a positive test for Bact. coli. Assuming that plus in 10 c.c. is 10 Bact. coli per 100 c.c., this would mean 4 Bact. coli per 100 c.c. as the maximum permissible figure. Figuring on the basis of probabilities, this would mean 5.1 Bact. coli per 100 c.c. The U. S. Treasury Standard for drinking water specifies that not more than 10 per cent of 10 c.c. portions shall show a positive test for Bact. coli, which would mean 1 Bact. coli per 100 c.c., according to the first method of calculation, or 1.05 Bact. coli per 100 c.c., on the basis of probabilities. In other words, the bathing beach standard proposed as desirable is about one fourth as stringent as drinking water.

Differences Between Indoor Swimming Pools and Bathing Beaches

In considering drinking water and indoor swimming pools as compared to salt water beaches and large inland streams, there is the difference that ready methods of purification by chlorination or filtration are available in the former case, whereas we are dependent on dilution and natural purification in the latter case.

There is another distinction which should be borne in mind between the presence of Bact. coli in salt water beaches or inland streams and in indoor swimming pools. The source of water supply of the indoor swimming pool is either a public supply or a private supply that is relatively free from Bact. coli. Therefore, the Bact. coli in the indoor swimming pool must be regarded as of human origin. Bact. coli in the waters of inland streams may be of animal origin and of no great sanitary significance. The same may be true to a lesser extent of harbors receiving a large flow of fresh water from land subject to contamination from animal sources—cultivated land, manure piles, etc.

In the very nature of indoor swimming pools, pollution should be carefully controlled by constant presence of free chlorine to destroy possible direct transmission of germs from one bather to another. Overcrowding of salt water beaches especially at times when tidal movement is at a minimum, may bring about a somewhat similiar condition. Possibly a remedy which has been used to some extent—the chloro-boat—may be used more widely in the future for such conditions, chlorine being applied directly to the water in the affected area.

Analyses of Massachusetts Beaches

In 1915, the Massachusetts State Department of Health collected several samples of sea water in the midst of a large number of bathers along Nahant Beach, a beach comparatively

free from serious sources of pollution. Averaging these results and figuring the Bact. coli per 100 c.c. on the basis of probabilities involved, a figure of 14.2 per 100 c.c. is obtained, which would not meet the proposed desirable standard. In the same way, samples along Revere Beach near Boston, which may possibly be affected by sewage from the Metropolitan area as well as very large numbers of bathers, averaged 751 Bact. coli per 100 c.c. Yet no direct ill effects have been traced.

Study of New Haven Beaches

As regards our Connecticut beaches, a valuable contribution to this subject appears in an article by Professor C.-E. A. Winslow and David Moxon on "Bacterial Pollution of Bathing Beach Waters in New Haven Harbor," in the May, 1928, issue of the American Journal of Hygiene. In this study, 291 samples were collected and examined from November, 1926, to April, 1927. These samples were not, of course, affected by pollution from bathers. They were collected from the west shore of the harbor, from Bradley Point to Sandy Point, including Savin Rock; from Fort Hale Beach; from Lighthouse Point Beach; and from the upper Quinnipiac River.

From the results of this study, the following points seem to be of especial interest in connection with this discussion. In general, the bathing beach waters of New Haven Harbor were found to be highly polluted. The west shore samples along areas now used for bathing averaged 19 Bact. coli per c.c. as determined by actual counts of eosin-methylene-blue agar. The samples along Fort Hale Beach and Morris Cove, closed for bathing by the New Haven City Health Department, averaged 17 Bact. coli per c.c. The samples along Quinnipiac River at a municipally operated beach averaged 68 Bact. coli per c.c. At Lighthouse Point Beach, another largely patronized beach, the average was 0.3 Bact. coli c.c. Multiplying these figures by 100 to obtain comparisons with the standards proposed, it is seen that none of the areas would begin to meet the above mentioned standard. Lighthouse Point Beach is by far the best area tested. Of the Quinnipiac River samples, 100 per cent of the samples showed Bact. coli in 0.1 c.c.; on the west shore 35 per cent; on the east shore, including Lighthouse Point Beach, 40 per cent. It is concluded from these studies that all of New New Haven Harbor inside a line from Bradley Point to Lighthouse Point should be closed for bathing until steps are taken to treat the sewage and reduce the pollution.

It is further concluded that the marked variation between the results obtained at a given station under varying conditions of

wind and tide make it clear that the California standard of 10 Bact. coli per c.c. is far beyond the limits of safety for beaches like those studied—at least if the standard is applied to average results. It is noted that the results at certain stations, however, would meet the California standards although at times exposed to gross pollution. It is suggested that perhaps an average of not over 1 Bact. coli per c.c. with a maximum of not over 10 per c. c. might be a reasonable figure, but much more study is considered necessary to set any standard.

New York City Standard

Another standard has been adopted by New York City Health Department where it is stated in the local health regulations that the water of open beaches should not contain more than 30 Bact. coli per cubic centimeter—a considerably more liberal allowance than any others previously mentioned. There would appear to be the probability that this New York standard was arbitrarily decided on after consideration of the analyses of the waters of various beaches and the sanitary surveys of surroundings. This New York standard would admit the beaches in New Haven Harbor from the analytical results secured by Winslow and Moxon except Quinnipiac River. In view of the fact that floating feces have been traced to the vicinity of Fort Hale Beach, this would seem to be a highly questionable proceeding.

Conditions Surrounding Sampling

Incidentally, it may be well to note at this point that standards must be considered along with sanitary surveys. For example, a beach water might come within a proposed standard on the basis of analytical results whereas changing conditions of wind or operation of sanitary sewer overflows might cause gross pollution at times other than represented by samples collected. In considering standards, too, it is very important that sampling shall include those stages of the tide when pollution of the bathing water is most likely to occur.

Duties of Health Authorities

It is unquestionably the duty of the local health officer if he is convinced that a beach is polluted to a dangerous extent, to post the beach or otherwise advise as to the danger. The difficult thing for the local health officer to decide is as to what constitutes a grave danger in the absence of accepted standards. He can probably start off with the following premises:

(1) If floating sewage is evident under some conditions of wind and tide, the beach is not a safe place to bathe.

(2) In view of the extreme leniency of the New York City

standards, if the waters of a beach come below these standards, the beach is at a danger point.

(3) If there are no serious sources of contamination in the vicinity, as along large portions of our shore in Guilford, Madison, Clinton, etc., the beaches are safe.

In between are a large number of Connecticut beaches. Many of these beaches are widely patronized. Their closure would mean the loss of thousands or hundreds of thousands of dollars. In general, little epidemiological evidence exists to support closures. What is the health officer and the State Department of Health to do regarding this class of beaches?

First, it would seem desirable that the State Department of Health should be given funds to cooperate with the various local health officials in studies of these beaches. Until such time as this is possible, the local health officers, at least in some of our large cities, can do considerable work along the lines of bacteriological studies of bathing beach waters both in and out of the bathing season. In some cases, observations of the travel of floats from the vicinity of sewer outlets will give valuable information. In connection with our shellfish studies at Greenwich and Norwalk, our float studies showed that in one tide, pollution traveled rapidly from large sewer outlets to condemned shellfish beds. At New Haven, more than one tide is necessary for the pollution to work its way out of the harbor.

Locations of sewer outlets are also necessary to know in considering the relative dangers of any area. The Connecticut State Department of Health has made surveys along much of the shore and many of the health officers along the shore have received maps of these surveys. The New York City Health Department has come forth with another regulation as to a minimum distance of 500 feet between sewer outlets and bathing beaches, which certainly seems a necessary requirement, even though an unduly lenient one in most instances.

The next important step is to set on foot movements to reduce the pollution of bathing areas by properly operated sewage treatment plants. The usual method of treatment for our shore communities consists of sedimentation in tanks to remove a large amount of the suspended solids and a corresponding large percentage of bacteria, and chlorination of the effluents from these tanks to destroy remaining pathogenic bacteria. This method of treatment is now about to be employed by the City of New Haven and a similar process is proposed for Norwalk where the bathing beach agitation aroused so much concern that the city voted to begin by employment of a consulting engineer to draw up plans for treatment of the city's sewage. Greenwich now has tank treatment and is working on plans for chlorination; Stamford has tank treatment and intends to chlorinate this sum-

mer; Stratford has tank treatment and chlorination; Bridgeport is beginning on a program of improvement; West Haven has tanks and will chlorinate this summer; and in New London, the outlets are scattered in fairly deep water where the dispersion gives some degree of protection. Public opinion is becoming aroused in many other cities and towns.

Summary

There is no hard and fast measuring stick to determine what the danger point of bathing beach pollution is. It is evident that considerable study is necessary to reach conclusions but that as health officials, it is our duty to encourage the consummation of such studies, with emphasis on the necessity for treatment of sewage to overcome dangerous or potentially dangerous conditions. An article in a weekly bulletin of the Connecticut State Department of Health during the bathing beach discussion last year summarizes the situation, and this applies equally to inland streams used for bathing:

"There is no occasion for hysteria in regarding the situation. It is in many questionable cases difficult to pass judgment on the relative safety. Analyses do show relatively the effect of sewage pollution but the presence of some contamination does not necessarily mean that the amount is sufficient to cause trouble. There is no definite proven bacteriological standard by which some of the intermediate class of bathing beaches may be ruled out and others passed as safe.

"No health department or official can surely guarantee the safety of any beach. The bathers themselves introduce some contamination. All contamination is relative and the danger encountered in any case varies with the distance and quantity of sewage discharge, the amount of dilution, conditions of tide and wind and other natural factors. Destruction of many harmful bacteria by natural causes undoubtedly helps. . . .

"The important thing is that the discharge of untreated sewage into salt water along our shores should be stopped and will be stopped when the weight of public opinion becomes sufficiently strong. The question cannot be dodged that the pollution of our harbors must be met by treatment of sewage if the bathing beaches in the harbors are to be continued in use. The situation is not new and is no different this year from other years except that each year brings increased pollution, as the population increases.

". . . . . In the opinion of the State Department of Health, there is no occasion for undue alarm, but there is need of public interest to improve conditions."

YOUR CHILD IS WHAT YOU MAKE HIM
FACING FACTS

Dorothea Rullkoetter A. B.

This Child knows that honesty is best even with oneself. He faces facts.

This child's **Parents** do not in their own lives try to escape facts.

They realize that intelligent obedience in childhood is a first step toward honesty, and that self-honesty is indispensable to mental health.

They secure obedience because they are reasonable and consistent in their demands and give straight answers.

They see that their child understands why he obeys.

If he disobeys, they never shield him from the consequences of which he has been warned.

If he does the wrong thing through ignorance, they learn how he reasoned, acting always on the belief that he is naturally good.

They train him early to recognize the rights of others, refusing to let him acquire false attitudes toward social obligations, which must later be unlearned.

Fact Facing

The attitude of many parents toward their children resembles that of the Duchess in the much quoted "Alice in Wonderland" who advised:

"Speak roughly to your little boy
And beat him when he sneezes;
He only does it to annoy
Because he knows it teases."

This is a point of view easy to assume because it is unthinking and evades facts which, if faced, may prove unpleasant. It is patent that rough speaking and beating neither affect the cause of the sneezing nor cure it and are therefore of no positive value. It is equally clear that both methods of treatment furnish outlets for the anger and annoyance of the adult. The parent who reacts so vehemently to his child's behavior is not being honest with himself and can hardly expect a straightforward response.

Unlike the Duchess, the mental hygienist would say to such parents:

"Think straight about your little boy.
Learn WHY it is he sneezes;
Unless there's reason to annoy
He'd rather do what pleases."

Straight-thinking parents know that misbehavior is merely a symptom of an underlying cause. Perhaps it denotes an effort to escape which they, by unwise methods, have forced the child to make. Perhaps it is the child's conception of what is reasonable and right, for the parental standpoint is not always the only one which is logical.

Jimmy, for example, develops the habit of teasing his small sister; he even treats her cruelly—pinches her, knocks her down, leads her into dangerous places and then deserts her. To relatives and friends he becomes a "bad boy," and is said to be acting quite abnormally. But how does the world look to Jimmy that he is impelled to such behavior? For the first three years of his life he was the center of his parents' devotion. Suddenly and without warning to him a small sister came into the family and proceeded to absorb the time and attention of all the grown-ups. As luck would have it, she was unusually bright and winsome and from the first attracted constant praise and admiration while Jimmy was subjected to disapproval and punishment. With perfect logic Jimmy reasoned that he was discriminated against, and that the best way to regain his former security would be to get rid of little sister. The result was the unacceptable conduct which brings unhappiness to both parent and child, but which actually is only the natural response to unexplained circumstances.

The parent who honestly faces facts sees in such situations his responsibility for training the child wisely and teaching him to face reality squarely. He never assumes that his child is bad; he always looks for the cause of trying conduct. He is consistent in his dealings and so impartial and understanding in attitude that such events as the arrival of a younger brother or sister give no occasion for distress. He explains the need for obedience and if the child still disobeys, he sees that punishment comes as a direct consequence of the misdeed and never as an outlet for his own feelings. By example and explanation he teaches his child to regard the rights of others and so adapts him to the demands of community living, which throughout life comprise an important set of facts to be faced.

A large percentage of those who suffer mental breakdowns are individuals who have never learned to confront difficulties. Under unusual strain they fail to make the sort of adjustment which is socially acceptable. In time they either become patients in mental hospitals or burden their relatives and friends at home. But the child who learns early to face facts will be prepared for the vicissitudes of life. He will have energy to meet his own problems successfully and some to spare for the well-being of others. His mental health will be sound.

VITAL STATISTICS

FOR SIX YEARS—JUNE, 1928

CONNECTICUT	1923	1924	1925	1926	1927	1928
BIRTHS	2568	2656	2577	2414	2479	2306
Birth Rate	20.9	21.2	20.2	18.6	18.8	17.1
MARRIAGES	2062	1951	1868	1867	1980	1584
Marriage Rate	16.8	15.6	14.7	14.4	14.9	11.8
DEATHS	1314	1298	1391	1348	1263	1412
Death Rate	10.7	10.4	10.9	10.4	9.6	10.5
COMMUNICABLE DIS.* DEATHS	144	150	140	136	112	147
Per Cent to Total Deaths	11.0	11.6	10.0	10.1	8.9	10.4
DEATHS UNDER 1 YEAR	187	162	132	154	113	133
Rate Per 1,000 Births	72.8	61.2	53.2	63.9	46.9	56.2

*Includes Typhoid Fever, Measles, Scarlet Fever, Whooping Cough, Diphtheria, Tuberculosis Pulmonary, Cerebrospinal Meningitis, Poliomyelitis, Influenza.

Laboratories

SUMMARY OF BUREAU ACTIVITIES

JULY, 1928

	DIAGNOSTIC					
	+	—	?	Unclassified	Specimens	Examinations
Typhoid	1	235	3	....	225	239
Paratyphoid A	....	239	....	....	....	239
Paratyphoid B	3	235	1	....	....	239
Diphtheria	44	746	....	....	402	790
Diptheria Virulence	3	30	....	....	28	33
Vincent's Angina	4	538	....	....	....	542
Hemolytic Streptococci	10	537	....	....	2	547
Tuberculosis	37	160	....	....	196	197
Syphilis	540	2460	84	....	2166	3084
Gonorrhea	24	111	....	....	135	135
Pneumonia	2	1	....	....	3	3
Malaria	....	3	....	....	3	3
Rabies	2	5	....	....	4	7
Specials	2	31	1	71	30	105
					3194	6163

CHEMICAL AND BACTERIOLOGICAL		
Milk samples	365	674
Cream samples	8	16
Water samples	411	523
Ice	9	9
Sewage samples	464	464
Trade waste	2	2
Clinical thermometers	237	237
Totals	4690	8088
Total laboratory procedures		16591

Laboratory Diagnosis For Typhus Fever

The Bureau of Laboratories is now equipped to make the Weil-Felix agglutination test for typhus fever on samples of blood from patients with an obscure fever. This procedure suggested itself as a case or two of this disease has occured in the state in the recent past. Pysicians desiring this test should so indicate very plainly on the information blank accompanying the specimen.

Where tests for typhus fever, undulant fever or tularemia may be desired it is desirable to have more blood than is ordinarily received in the mailing container supplied for the Widal test. In such instances it is urged that physicians use the outfit distributed for collecting blood for Wassermann test. If the Wassermann test is not desired, the accompanying information blank should be discarded and the particulars of the case furnished on a prescription blank or a memorandum sheet. This is desirable to prevent the specimen being handled in the usual routine way.

Vital Statistics

MONTH OF JUNE

Totals for the First Six Months of the Year, 1926, 1927, 1928

Year	Births	Birth Rate*	Marriages	Mar. Rate*	Deaths	Death Rate*
1926	14,705	18.8±.1	5,671	7.3±.1	10,105	13.0±.1
1927	14,571	18.3±.1	5,846	7.3±.1	8,920	11.2±.1
1928	13,781	17.0±.1	4,802	6.0±.1	9,589	12.1±.9

*Per 1,000 population, annual basis

The figures above will give an idea of what has occurred during the first half year of 1928 in comparison with the two previous years. The result is not so encouraging as it was a year ago. The births continue to be low, with a rate of only 17.0±.1 per 1,000 of the population for 1928. This is the same as it was last month.

Of course, the June Bride made her usual appearance, but not in such force as is usual. However, the marriage rate got a little boost, from 4.7 last month to 6.0 as above, which is below—far below—1927 and 1926.

Last month the accumulated death rate for the first five months of 1928 was 12.1±.1. The rate is the same for the first six months, so even if the record did not gain it at least held its own. But, if 1928 is to approach the record figures of 1927 it must soon be done.

Births

Records of 2,306 births were received, to give a birth rate of 17.1. This is a bit higher than May, when the rate was 16.8. As has been the case for many months, the rate is the lowest to appear in the last six years.

Last month, of the towns in the state over 5,000 in population, only 2 reported increases of 10 or more in 1928 compared with 1927.

This month there are 7 such towns, namely:

Ansonia	13±8	New Haven	21±23
Hamden	10±6	Norwich	14±11
Meriden	16±11	West Hartford	12±8
West Haven	24±9		

Only the increase for West Haven is significant, although those for Ansonia, Hamden and West Hartford are on the borderland.

During the month there were 59 stillbirths recorded, 29 less than the 88 recorded in 1927. This would make a total

of 2,365 births for the month, 1928, and the stillbirths therefore appeared at the rate of 25.5±3.2 per 1,000 total births. A year ago the rate was 34.3±3.8 and the difference between these rates is 8.8±5.0 and shows that while the actual number in reduction may appear relatively large, the reduction in rate is hardly to be considered worthy of special notice.

The sex distribution of the stillbirths is extremely interesting. There were 36 females and 23 males to give a sex ratio in favor of females of 156 females to 100 males. This is very unusual. In general the sex ratio is to the males. Last month, when it was unusually high, it was 180 males to 100 females.

Deaths

There was again an increase in the number of deaths recorded, compared with 1927. A total of 1,412 death records were received, against 1,263 a year ago, an increase of 149. The rate, on an annual basis, was 10.5. This is not the highest rate to appear for June in the last six years, but it is considerably higher than the 9.6 experienced last year. With half the year gone, and the total number of deaths for 1928 already 669 more than 1927, it is hardly likely that 1928 will equal the exceptional record of last year. It is not an impossibility, but an improbability.

In order to show the month in better comparison with last year the following table has been prepared for a selected list of the causes of death:

Cause of Death	1928	1927	Increase	Decrease
Typhoid fever	0	1±1	....	1±1
Measles	11±3	3±2	8±4	....
Scarlet fever	5±2	1±1	4±2	....
Whooping cough	20±4	2±1	18±5	....
Diphtheria	3±2	13±4	....	10±4
Influenza	22±5	11±3	11±6	....
Poliomyelitis	0	0	....	....
Epidemic encephalitis	1±1	1±1	....	....
Cerebrospinal meningitis	2±1	1±1	1±2	....
Tuberculosis, pulmonary	84±9	80±9	4±13	....
Tuberculosis, other forms	14±4	12±3	2±5	....
Cancer	151±12	134±12	17±17	....
Diabetes mellitus	24±5	18±4	6±7	....
Diseases of the heart	213±15	212±15	1±20	....
Broncho pneumonia	42±6	32±6	10±9	....
Lobar pneumonia	51±7	30±6	21±9	....
Pneumonia undefined	3±2	2±1	1±2	....
Diarrhea and enteritis, under 2	7±3	12±3	....	5±4
Nephritis	118±11	98±10	20±15	....
Puerperal diseases	8±3	14±4	....	6±5
Suicide	23±5	15±4	8±6	....
Other causes	610±25	571±24	39±34	....
Totals	1412±38	1263±36	171	22

The list of increases is long. The increases for measles, scarlet fever, whooping cough, influenza and lobar pneumonia are significant. This is especially so for whooping cough. Last month the increase in this disease was in the borderland of significance. This month no doubt remains.

The decrease for diphtheria is the only decrease of significance—and that decrease is very definite.

Referring to the totals for the year for certain diseases the following table is of interest:

Cause of Death	1928	1927	Increase	Decrease
Typhoid fever	6	6	....	....
Measles	45	17	28	....
Scarlet fever	19	15	4	....
Whooping cough	65	27	38	....
Diphtheria	48	45	3	....
Influenza	258	224	34	....
Poliomyelitis	4	1	3	....
Epidemic encephalitis	11	8	3	....
Cerebrospinal meningitis	8	5	3	....
Tuberculosis, pulmonary	521	528	....	7
Tuberculosis, other forms	73	71	2	....
Cancer	836	828	8	....
Diabetes mellitus	*	*		
Diseases of the heart	1366	1502	....	136
Broncho pneumonia	528	373	155	....
Lobar pneumonia	608	461	147	....
Pneumonia undefined	22	12	10	....
Diarrhea and enteritis under 2	45	65	....	20
Nephritis	*	*		
Puerperal diseases	90	91	....	1
Suicide	124	96	28	....
Accident	527	495	32	....
Totals	5204	4870	498	164

*Not available

The column of increases is a long one. Especially to be noted are the increases for measles, whooping cough and the pneumonias with influenza in prominent association. Note also the increases for suicide and accident.

Of the decreases those for diseases of the heart and diarrhea and enteritis under 2 are worthy of note.

The accidental deaths include 33 deaths in automobile accidents for June 1928 as compared with 19 a year ago. For the first six months the record stands as 177 for 1928 against 107 for 1927, an increase of 70.

See page 175 for Six Year Table—Vital Statistics.

Statistics

June, 1928

State of Connecticut	Population Est. as of July 1, 1928 Based on U. S. Census	TOTALS				DEATH RATES			Typhoid Fever (1)	Measles (7)	Scarlet Fever (8)
		Births	Stillbirths	Marriages	Deaths	Deaths under 1 year	All Causes (per 1,000 pop.)	Children under 1 year (per 1,000 births)			
	1,613,874	2306	59	1584	1412	133	10.5	56.2	.....	11	5
Ansonia	19,805	35	.....	24	17	1	10.3	52.4	.....	.....	.....
Branford	7,133	8	.....	6	5	.....	8.4	.....	.....	.....	.....
Bridgeport	179,163	217	8	.....	117	11	7.9	42.2	.....	2	1
Bristol	26,820	45	4	48	19	3	8.5	55.8	.....	.....	.....
Danbury	21,931	37	.....	38	29	4	15.9	83.2	.....	.....	.....
Derby	13,194	12	1	9	14	1	12.7	28.3	.....	.....	.....
East Hartford	14,311	19	.....	8	12	.....	10.1	.....	.....	.....	.....
East Haven	5,030	6	.....	.....	3	1	7.2	137.2	.....	.....	.....
Enfield	13,445	19	1	18	10	.....	8.9	.....	.....	.....	.....
Fairfield	16,091	24	.....	6	8	.....	6.0	.....	.....	.....	.....
Glastonbury	6,288	9	.....	3	1	.....	1.9	.....	.....	.....	.....
Greenwich	26,956	31	2	97	22	3	9.8	78.3	.....	.....	.....
Groton	11,607	19	.....	10	12	1	12.4	95.2	.....	.....	.....
Hamden	11,002	24	.....	16	17	.....	18.5	.....	.....	.....	.....
Hartford	172,288	263	12	200	130	14	9.1	40.3	.....	5	1
Killingly	9,517	9	1	12	6	.....	7.6	.....	.....	.....	.....
Manchester	22,478	38	1	19	27	4	14.4	118.0	.....	.....	.....
Meriden	37,085	64	3	47	30	2	9.7	30.4	.....	.....	.....
Middletown	23,000	22	1	26	21	4	11.0	78.4	.....	.....	.....
Milford	15,273	18	1	11	10	.....	7.9	.....	.....	1	.....
Naugatuck	17,069	19	1	23	9	1	6.3	116.5	.....	.....	.....
New Britain	72,654	109	.....	77	56	7	9.3	53.6	.....	.....	1
New Haven	187,705	283	7	227	153	17	9.8	57.3	.....	1	.....
New London	30,770	45	1	38	37	5	14.4	80.0	.....	.....	.....
Norwalk	30,537	60	1	30	31	2	12.2	34.8	.....	.....	.....
Norwich	30,762	71	.....	48	38	8	14.8	132.8	.....	.....	.....
Plainfield	8,909	13	.....	7	6	1	8.1	95.2	.....	.....	.....
Plainville	5,191	7	.....	3	5	.....	11.6	.....	.....	.....	.....
Plymouth	6,554	3	.....	2	1	.....	1.8	.....	.....	.....	.....
Putnam	9,334	15	1	19	8	.....	10.3	.....	.....	.....	.....
Seymour	8,526	3	.....	7	4	.....	5.6	.....	.....	.....	.....
Shelton	12,000	13	.....	12	6	.....	6.0	.....	.....	.....	.....
Southington	10,123	12	.....	15	6	1	7.1	89.6	.....	.....	.....
Stafford	5,490	6	.....	8	5	.....	10.9	.....	.....	.....	.....
Stamford	49,923	86	2	68	49	4	11.8	39.4	.....	.....	.....
Stonington	11,152	7	.....	9	10	.....	10.8	.....	.....	.....	.....
Stratford	17,451	30	.....	3	5	.....	3.4	.....	.....	.....	.....
Thompson	5,252	7	.....	3	4	1	9.1	134.8	.....	.....	.....
Torrington	25,453	33	1	16	22	2	10.4	51.8	.....	.....	1
Vernon	8,751	9	.....	15	6	1	8.2	77.4	.....	.....	.....
Wallingford	12,747	13	.....	6	13	1	12.2	123.7	.....	.....	.....
Waterbury	107,908	132	2	89	81	11	9.0	64.0	.....	.....	.....
Watertown	7,732	12	.....	6	4	.....	6.2	.....	.....	.....	.....
West Hartford	12,763	37	.....	10	19	3	17.9	238.5	.....	1	.....
West Haven	19,334	53	1	19	26	2	16.1	68.4	.....	.....	.....
Westport	5,862	6	1	5	5	.....	10.2	.....	.....	.....	.....
Wethersfield	5,387	7	.....	8	8	.....	17.8	.....	.....	.....	.....
Winchester	9,144	11	.....	8	14	1	18.4	71.9	.....	.....	.....
Windham	14,509	23	1	15	16	3	13.2	124.2	.....	.....	1
Windsor	6,880	9	.....	6	7	1	12.2	218.1	.....	.....	.....
Other States		21	.....	.....	22	1	.....	.....	.....	.....	.....
Towns under 5,000	205,585	232	5	184	226	11	13.2	57.2	.....	1	.....

DEATHS FROM IMPORTANT CAUSES

Whooping Cough (9)	Diphtheria (10)	Influenza (11)	Poliomyelitis (22)	Epidemic Encephalitis (23)	Meningitis Cerebrospinal (24)	Tuberculosis-Pulmonary (31)	Tuberculosis-Other Forms (32-37)	Cancer (43-49)	Diabetes Mellitus (57)	Diseases of the Heart (87-90)	Pneumonia-Broncho 100 (1)	Pneumonia-Lobar 101 (1)	Pneumonia-undefined 101 (2)	Diarrhea and Enteritis under 2 (113)	Nephritis (128-129)	Puerperal Diseases (143-149)	Suicide (165-174)	Accident (175-189)
20	3	22	.....	1	2	84	14	151	24	213	42	51	3	7	118	8	23	109
2	.....	.....	.....	.....	.....	2	.....	1	.....	3	1	1	.....	.....	2	.....	.....	1
.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	1	.....
3	2	3	.....	.....	.....	8	4	10	.....	13	2	9	.....	.....	8	1	1	13
1	.....	1	.....	.....	.....	.....	.....	3	1	1	.....	.....	.....	.....	2	1	.....	.....
.....	.....	.....	.....	.....	.....	1	.....	2	2	6	.....	2	1	.....	1	.....	.....	4
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	1	1	.....	.....	2	.....	1	1
.....	.....	.....	.....	.....	.....	.....	.....	.....	1	3	1	.....	.....	.....	.....	1	1	2
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
.....	.....	.....	.....	.....	.....	1	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	4
.....	.....	.....	.....	.....	.....	2	.....	.....	.....	1	.....	1	1	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
1	.....	.....	.....	.....	.....	3	.....	1	.....	2	1	1	.....	.....	.....	.....	3	.....
.....	.....	.....	.....	.....	.....	.....	.....	2	.....	4	.....	.....	.....	.....	1	.....	.....	1
.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	2	.....	.....	3	.....	.....	3
2	.....	4	.....	.....	.....	5	1	15	4	23	6	3	.....	2	13	.....	2	6
.....	.....	.....	.....	.....	.....	.....	.....	1	.....	2	.....	.....	.....	.....	.....	.....	.....	.....
2	.....	1	.....	.....	.....	.....	.....	4	2	4	.....	.....	.....	.....	3	.....	.....	2
.....	.....	1	.....	.....	.....	4	.....	4	2	7	1	1	.....	.....	1	.....	1	2
1	.....	.....	.....	.....	.....	1	.....	1	.....	1	.....	1	.....	.....	.....	.....	2	1
.....	.....	.....	.....	.....	.....	2	.....	2	.....	1	.....	.....	.....	.....	.....	.....	.....	1
.....	.....	.....	.....	.....	.....	1	2	.....	.....	1	1	.....	.....	.....	.....	.....	.....	.....
1	.....	.....	.....	.....	.....	5	1	6	.....	8	3	1	.....	.....	1	.....	1	3
4	.....	3	.....	.....	.....	11	2	15	4	26	6	6	1	.....	18	.....	2	5
.....	.....	.....	.....	.....	1	1	.....	7	.....	4	1	.....	.....	.....	2	.....	.....	2
.....	.....	2	.....	.....	.....	1	.....	5	.....	7	1	.....	.....	.....	2	.....	.....	5
.....	1	2	.....	.....	.....	.....	.....	3	.....	8	1	1	.....	1	3	1	1	3
.....	.....	1	.....	.....	.....	2	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	1	.....	1	.....	1	.....	.....	.....	.....	1	.....	.....	1
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	2	.....	1	1	.....	.....	.....	.....	.....	1	1
.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....	1	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	2	.....	.....	.....	.....	.....	.....
.....	.....	1	.....	.....	1	6	1	4	2	3	2	2	.....	.....	6	.....	.....	5
.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	2	.....	1	2
.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	1	.....
.....	.....	.....	.....	.....	.....	3	.....	3	.....	1	.....	2	.....	.....	3	.....	.....	4
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	1	.....	.....	.....	.....
.....	.....	1	.....	.....	.....	.....	.....	.....	2	3	1	2	.....	.....	.....	.....	.....	.....
.....	.....	1	.....	.....	.....	5	2	10	1	6	2	3	.....	.....	6	2	1	8
.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	2	.....	5	1	1	.....	.....	.....	.....	.....	1
.....	.....	.....	.....	.....	.....	2	.....	7	1	2	.....	.....	.....	.....	1	1	1	2
.....	.....	1	.....	.....	.....	.....	.....	2	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	1	.....	.....	.....
.....	.....	.....	.....	.....	.....	1	.....	1	.....	1	1	.....	.....	.....	3	.....	.....	2
.....	.....	.....	.....	.....	.....	2	.....	1	.....	4	.....	.....	.....	1	2	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	1	.....	.....	.....	.....	.....	.....	3
.....	.....	.....	.....	1	.....	2	.....	3	.....	1	1	2	.....	.....	1	.....	.....	.....
3	.....	.....	.....	.....	.....	7	.....	26	2	39	5	6	.....	2	28	1	2	19

Occupational Diseases

OCCUPATIONAL DISEASES

For Month of July, 1928

ETIOLOGICAL FACTORS

Acid (nitric)	
Conjunctivitis	2
Dermatitis	1
Allergia	
Vegetable dust	6
Oil	
"Grinding oil" dermatitis	1
Lead	
Chronic	1
Mercury	
Dermatitis	18
Conjunctivitis	5
Turpentine	
Dermatitis	2
Inhalation	1
	37

Necessity for Reporting Occupational Disease

Since the organization of the Division of Occupational Diseases in January, all physicians have been notified of the existence of the statute requiring them to report all cases of occupational diseases coming under their observation to the State Department of Health.

While the number of reports has continued to increase, the increase does not represent the actual number of reportable cases and we urge upon physicians who have not been reporting the necessity of complying with the statute.

Every physician recognizes that only through adequate reporting has the control of communicable diseases been established. We have the cooperation of the manufacturers and with the cooperation of the physicians we will have a true prospective of conditions in industry.

This division is primarily a service department for the elimination and prevention of occupational diseases. Unless we know the incidence and type of occupational diseases occurring in Connecticut, we are not in a position to render a full measure of service. Physicians are again reminded that the law requires that reports of all cases of occupational diseases coming under their observation, must be sent to the State Department of Health within 48 hours. Special report forms are supplied for this purpose.

Preventable Diseases

INCIDENCE OF DISEASE FOR MONTH OF JULY, 1928

(As compared with previous years)

A comparison of the daily morbidity reports received during the month of July, 1928, with the corresponding month for the years 1923, 1924, 1925, 1926 and 1927.

	Average 1923-1927 for July	Mean 1923-1927 for July	1923	1924	1925	1926	1927	1928
Cerebrospinal meningitis ..	4	4	9	5	2	2	4	4
Diphtheria	93	80	127	132	80	47	77	51
Encephalitis epidemic	3	3	7	3	4	2	....	2
Measles	280	261	258	261	358	394	131	798
Poliomyelitis	7	8	9	15	8	1	4	5
Scarlet fever	104	115	115	123	75	121	85	66
Smallpox	5	....	....	27	....	....	....	....
Typhoid fever	20	20	28	24	17	20	9	4
Tuberculosis, pulmonary ..	142	133	133	142	111	129	196	138
Whooping cough	234	212	289	212	410	146	113	356

A comparison of the morbidity of these diseases for the two preceding months, May, 1928 and June, 1928 with the July 1928 record is as follows:

	May 1928	June 1928	July 1928
Cerebrospinal meningitis	6	7	4
Diphtheria	98	74	51
Encephalitis epidemic	4	2	2
Measles	1472	1409	798
Poliomyelitis	....	3	5
Scarlet fever	384	145	66
Smallpox	11	5	....
Typhoid fever	4	4	4
Tuberculosis, pulmonary	145	162	138
Whooping cough	446	492	356

Cases of Certain Other Reportabe Diseases

Chickenpox	54	Septic sore throat	13
Dysentery amebic	1	Tetanus	3
Encephalitis epidemic	2	Undulant fever	1
German measles	15	Gonorrhea	143
Influenza	7	Syphilis	143
Malaria	1		
Mumps	110	Total	496
Paratyphoid fever	3		

Cases of Certain Reportable Diseases

July, 1928

	Population Est. as of July 1, 1927	Typhoid Fever	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Meningitis Cerebrospinal	Poliomyelitis	Tuberculosis Pulmonary	Tuberculosis Other Forms	Pneumonia Lobar	Pneumonia Broncho-	Other Com. Diseases
State Total	1,613,874	4	798	66	356	51	4	5	138	14	39	61	496
NEW HAVEN CO.	483,603		126	6	125	6	2		51	6	7	11	98
New Haven	187,705		29		39	3	1		32	6	1	4	47
Waterbury	107,908		24		4	2			10		2	2	13
Meriden (city and town)	37,085		6	3	6	1	1		5			2	7
Ansonia	19,805		14		6				1			3	13
West Haven	19,334			1							1		2
Naugatuck	17,069												2
Wallingford (town and boro)	12,747			1									
Milford	15,273		8		1								
Derby	13,194								3		1		
Hamden	11,002		10		51						2		8
Branford (town and boro)	7,133		1										2
Seymour	8,526												1
Towns under 5,000	21,792		34	1	18								3
FAIRFIELD CO.	387,138	3	116	18	48	15	2	3	25	5	5	16	89
Bridgeport	179,163	2	54	5	16	7	1		15	3	3	15	28
Stamford (city and town)	49,923		24	4	6		1		2		1		8
Norwalk	30,537												20
Danbury (city and town)	21,931							1			1		5
Greenwich (town and boro)	26,956		6	4	17	3			1				17
Stratford	17,451		1			2			3				1
Fairfield	16,091	1	7										
Shelton	12,000		3	4					1	1			4
Westport	5,862		10										
Towns under 5,000	27,224		11	1	9	3		2	3	1		1	6
HARTFORD CO.	411,342		360	17	138	20		1	32	3	20	33	224
Hartford	172,288		119	6	29	9		1	13	2	11	22	150
New Britain	72,654		27	1	52	2			10	1	1	2	17
Bristol (city and town)	26,820		2		18				2		1	1	4
Manchester	22,478		7	1	8				2		1	2	7
Enfield	13,445		7		1	3					1		3
East Hartford	14,311		4		2	1					1	1	3
Southington (town and boro)	10,123			4	4	1					1		2
West Hartford	12,763		30	2	15	2						3	11
Windsor	6,880		3			1			1				
Glastonbury	6,288		3		1							1	
Wethersfield	5,387		3		3						1		
Plainville	5,191												
Towns under 5,000	42,714		155	3	5	1			4		2	1	27
NEW LONDON CO.	116,306		48	10	15	4		1	11		1	1	25
Norwich (city and town)	30,762		9	10		2			4				3
New London	30,770		12		9				5		1		8
Stonington (town and boro)	11,152		1			1							1
Groton (town and boro)	11,607		9		4								3
Towns under 5,000	32,015		17		2	1		1	2			1	10
LITCHFIELD CO.	81,518	1	13	3	4	2			7		1		27
Torrington (town and boro)	25,453	1		2					2				4
Winchester (inc. Winsted)	9,144								4				3
Plymouth	6,554												1
Watertown	7,732		1			1							1
Towns under 5,000	32,635		12	1	4	1			1		1		18
WINDHAM CO.	56,717		83	10	8	1			3		2		13
Windham (inc. Willimantic)	14,509		4	1					1				
Putnam (city and town)	9,334		68	1							1		3
Plainfield	8,909		2										1
Killingly (inc. Danielson)	9,517		4		3				1		1		3
Thompson	5,252		3										4
Towns under 5,000	9,196		2	8	5	1			1				2
MIDDLESEX CO.	49,372		28		18	2			6		1		13
Middletown (city and town)	23,000		10			1							12
Middletown State Hospital													
Towns under 5,000	9,196		18		18	1			6		1		1
TOLLAND CO.	27,878		24	2		1			3		2		7
Vernon (inc. Rockville)	8,751		4			1			1		1		
Stafford (town and boro)	5,490		16										1
Towns under 5,000	13,637		4	2					2		1		6

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Connecticut Health Bulletin

"For a Clean State and a Healthy People"

Vol. 42 **September, 1928** **No. 9**

SPECIAL ARTICLES

Indoor Swimming Pools in Connecticut

Your Child is What you Make Him—Inferiority Feelings

July and August Vital Statistics

STANLEY H. OSBORN, M. D., C. P. H., Commissioner

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MONTHLY HEALTH BULLETIN

Vol. 42 September, 1928 No. 9

INDOOR SWIMMING POOLS IN CONNECTICUT

By Warren J. Scott

In 1925, a comprehensive survey of indoor swimming pools in Connecticut was carried out by the Bureau of Sanitary Engineering of the State Department of Health. At that time, the pools were rated as to sanitary condition; a conference of swimming pool operators was called by the State Department of Health; and operating suggestions were forwarded to all swimming pool managements.

In order to check up on the manner of fulfillment of Connecticut swimming pools with the state sanitary code, another survey of indoor swimming pools was recently completed. Residual chlorine tests were carried out; samples of the water were collected and analyzed; and general observations made as to appearance of the pool and operating procedure. A classification on the basis of these findings was again made and a comparison of the 1925 and 1928 findings is as follows:

	1925	1928
Very good	3	5
Good	3	6
Fair	27	10
Poor	8	18
	41	39

Two pools were found closed at the time of the 1928 survey. This comparison is far from encouraging. It indicates that whereas more pools have attained a satisfactory rating, yet of the "in-between" class, a number have slipped back. It is true, however, that the 1928 ratings were much stricter than those of 1925. The explanation for this lack of improvement in most cases lies in the carelessness or indifference on the part of the swimming pool managements. Where a real, earnest effort has been made, improvements have been brought about, and the department has endeavored at all times so far as possible with limited personnel to cooperate with local officials.

The reasons for the poor ratings obtained by so many pools are in the great majority of cases: (1) failure to maintain residual chlorine in the swimming pools, with consequent poor bacteriological results, and (2) failure to maintain the pool water in an alkaline condition with the existence of acid water. The results found and remedies proposed are discussed.

Residual Chlorine

A few indoor swimming pools in Connecticut are of the fill-and-draw type but the vast majority have filtration and recirculation systems whereby water is drawn off, filtered or filtered and chlorinated, and returned to the pool. Filtration helps to clarify the water but the percentage of bacteria removed in the usual type of pressure filters is small and it is the amount of chlorine on which depends the destruction of harmful bacteria introduced into the water. There are methods of disinfection of swimming pool water other than chlorination, such as violet ray and ozone, but as there is no readily measurable index of their efficiency and as all Connecticut swimming pools using these methods, also chlorinate, only chlorination will be discussed.

Chlorination may be carried out by adding liquid chlorine from chlorine machines (chlorinators) to the recirculation system, or by adding hypo-chlorite of lime or other chlorine compound to the recirculation system or more commonly, directly to the pool water. It is not the total amount of chlorine but the so-called "residual" chlorine that is the disinfecting agent. Some of the chlorine enters into combination with materials in the water to form various salts but after the so-called "chlorine demand" of the water is satisfied, the excess or "residual" chlorine remaining is an effective disinfectant. The chlorine demand of the water will vary, depending on the amount of sediment in the water, the temperature, and other factors. The chlorine demand of a swimming pool water, therefore, varies also with the number of persons using the pool. This is one reason why some swimming pool operators get into difficulties. They settle on a routine programme for addition of chlorine regardless of the number of users and other considerations and soon have trouble from too little chlorine or too much chlorine. How, then, can the condition of the pool at any time with reference to the amount of residual chlorine be determined? By a very simple test, known as the ortho-tolidin test.

About 100 c.c. of water are collected from the pool and to this is added 1 c.c. of ortho-tolidin solution. If residual chlorrine is present, a green or greenish yellow color is produced (very heavy excesses may cause a yellow, red or orange), and the deepness of the color indicates the amount of residual chlorine. For purposes of comparison, color standards of various shades can be prepared and it can be determined what amount of residual chlorine is present. For swimming pool operation, a residual chlorine content of 0.3 parts per million to 0.5 parts per million is desirable at all times the pool is

open for use. A complete testing outfit with various color tubes can be purchased from a chemical supply house or a testing device using a green glass can be used. Residual chlorine testing equipment also comes with a hydrogen ion swimming pool testing outfit which is described later. Names of manufacturers of equipment will be furnished by the State Department of Health upon request. Every swimming pool should have some form of ortho-tolidin testing outfit.

It has already been said that sufficient chlorine should be added to the pool water but the question arises as to what happens in the event that too high residual chlorine is maintained. There seems to be evidence that if very much more than 0.5 p.p.m. of residual chlorine is present, irritation of the eyes is likely to result, although in some pools a residual as high as 1.0 p.p.m. has apparently produced no ill effects. In any case, 1.0 p.p.m is certainly the maximum limit which should be maintained and all evidence seems to indicate that 0.3 to 0.5 p.p.m. of residual chlorine is sufficient to destroy all harmful bacteria.

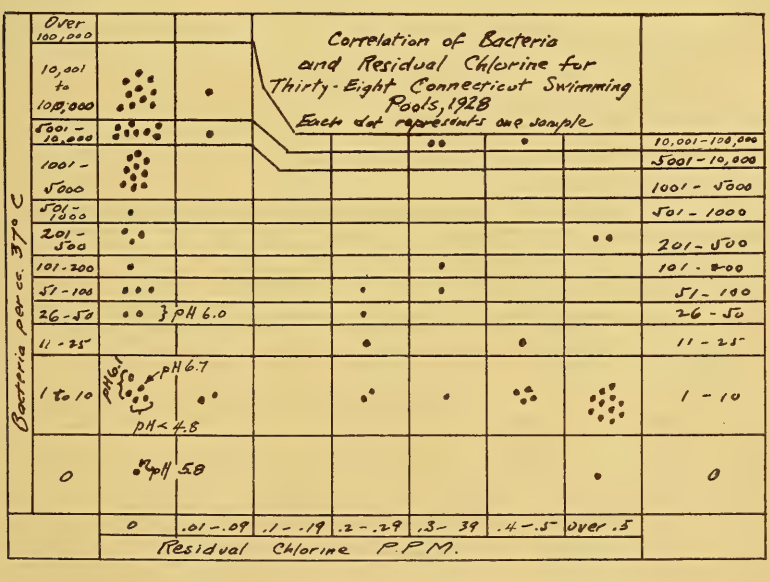

Fig. 1 Correlation of Bacteria and Residual Chlorine for Pools Examined

Residual Chlorine and Bacteria

Figure 1 clearly indicates that with a residual chlorine of .2 p.p.m., bacteria counts on samples collected in the 1928 survey were low, except that in three cases, high bacteria counts accompanied considerable amounts of residual chlor-

ine. The reason for these exceptions might be explained by non-penetration of sediment in the water by the chlorine. It is to be noted, moreover, that in no cases were organisms of the coli-aerogenes group (indicators of dangerous pollution) isolated in the presence of residual chlorine in excess of 0.2 p.p.m. It is almost always true that high bacteria counts indicate that insufficient residual chlorine was present in the pool at the time of collection of samples.

The presence of residual chlorine in a swimming pool water is not only an indication that harmful bacteria have been destroyed, but it is assured that if harmful bacteria are introduced as the pool is in use, these bacteria will be immediately destroyed by the action of the chlorine; provided, of course, that an unduly large access of contamination is cared for by replenishing the chlorine supply when it is exhausted, and provided sediment is practically absent from the water.

Manner of Adding Chlorine

Where a chlorinator is used to supply chlorine to the recirculation system, the dosage is regulated by a measuring device, such as a siphon or bubble meter, on the chlorinator. It is practically impossible to set this so as to take care of all conditions, because of the varying bathing load on the pool. Occasionally, even where a chlorinator is employed, it may be desirable at a time when the residual chlorine is low or absent (the latter shown by no color with the ortho-tolidin test), to add hypo-chlorite of lime directly to the pool and then depend on the chlorinator to keep up the supply which is being constantly used up by the bathers, and in part, too, by loss to the atmosphere.

A variety of compounds such as hypo-chlorite of lime or "chloride of lime" can be used to disinfect the pool by hand. Powders are usually dissolved in water, strained through cloth to remove impurities, and added to the pool. Commercial "chloride of lime" loses strength upon standing and purchases in too large amounts are not desirable. It should be stored in a cool, dry place. Various liquid solutions of chlorine compounds are put up by chemical supply houses and these are fairly convenient, if of suitable strength and not too expensive. Every effort should be made to mix the chlorine throughout the pool contents.

In the absence of proper control by determination of free chlorine or as a starting point for adjustment, about one pound of chloride of lime or about ⅓ lb. of liquid chlorine (furnished in cylinders—not a solution of chlorine compounds) should be added **daily** per 50,000 gallons of water in the pool. These are only average figures under Connecticut conditions, and as already stated, the ortho-tolidin test should be the

guide as to dosage. It will be found that satisfactory bacteriological results will follow proper ortho-tolidin control.

Alkalinity

The measure of bi-carbonate alkalinity in the water of a swimming pool can be determined by the so-called methyl-orange or erythosine test. This test is very simple to make. Some chemical equipment is necessary and this can be purchased from a chemical supply house. A list of the equipment and directions for making these tests will be furnished by the State Department of Health upon request. It has generally been considered desirable to maintain a bi-carbonate alkalinity of at least 10 to 20 p.p.m., to keep the water on the alkaline side, thus avoiding possible troubles with acid water and sore eyes. To increase the alkalinity of a pool water, soda ash is usually added.

In the usual re-circulation type of pool, pressure sand filters are used together with coagulation. The following remarks on coagulation and soda ash addition are quoted from a discussion of the swimming pool survey in 1925 in the February, 1926, bulletin of this Department, by Charles L Pool, Assistant Engineer of this Bureau:

> "The coagulant commonly used is alum, and in all cases is added in crystal form to a pot, which feeds a solution of it into the main leading to the filter. The purpose of alum addition is to form a 'floc' i.e., to coagulate finely divided suspended matter into larger clumps which the filter will strain out. The pots are filled at intervals varying from days to weeks and after filling no great uniformity of feed throughout the period is expected. At the majority of the pools the application of alum was found to be controlled in a very unsatisfactory fashion. Manifestations of this in a number of instances were observed where jerky alum feed allowed for a time the introduction of acid water into alkaline water in the pool. The result of this was to form a 'floc' in the pool which was troublesome in settling out on the bottom. The desired place for the 'floc' is between the alum pot and the filter to be caught by the latter.
>
> "The alum used in feed pots should be either potash alum or ammonium alum and not "Filter Alum" so called, or sulphate of alumina which is too soluble and does not retain its crystal form. Weights of alum used should be kept as part of operating records and it might be desirable to add a determined amount daily for the sake of uniformity. At some pools alum is added only when the water begins to visibly show its need. The amount of alum usually desirable, though it varies considerably where close checks are kept, may be taken as about one-half pound for each 10,000 gallons pumped. Alum reduces the natural alkalinity of the water and, if this goes too far, an acid water often results which stings the eyes and corrodes metals. To counteract this, a rule-of-thumb method is to add about one-half as much soda ash as alum by weight, which will restore the alkalinity. The soda ash is usually added directly to the pool, and thorough mixing with the entire pool contents should be the aim. The foregoing remarks on addition of chemicals are for rough use only, and frequent checks on the alkalinity should be made."

Recently there has been a tendency to advocate hydrogen ion control of swimming pool water so as to avoid acid conditions, rather as a replacement of the alkalinity control. The technique of the hydrogen ion test (or test for determining the concentration of hydrogen ions) is very similiar to the residual chlorine test. A small amount of chemical is added to a sample of the water and the resulting color is compared with color standards furnished with the hydrogen ion testing outfit. The Department will gladly advise as to the securing of such an outfit. It has already been mentioned that the hydrogen ion testing outfit usually sold also contains equipment for residual chloride tests.

In the recent survey, the Department tabulated for purposes of comparison, the alkalinities (methyl orange) and the hydrogen ion concentration (the hydrogen ion concentration is expressed usually by the symbol pH). It was found, as shown by Figure 2, that where the pH was 7.0 or above, the alkalinity was over 20 p.p.m. and that where the pH was kept between 7.0 and 7.6, the alkalinities ran as high as 145 p.p.m.* There seems to be no objection to such high alkalinities provided proper coagulation and filtration occur. On account of the ease of making the hydrogen ion test, many pools now use this test to indicate any tendency toward acid water. It seems advisable to keep the hydrogen ion concentration above pH 7.0 and perhaps not greater than pH 7.6. To raise the pH figure, soda ash is added similarly to the case of alkalinity.

Frequency of Changing Swimming Pool Water

It is found that in the case of most Connecticut pools with recirculation systems, the pool is completely drawn off from two to four times a year. Some water has to be added frequently to replace that lost in the splash gutters and by evaporation. If the recirculation and disinfection system keeps the water clear and bacteriologically satisfactory, there appears to be no reason for more frequent renewal from a health standpoint. Aesthetic considerations might render more frequent renewal desirable. Recirculation systems should preferably have sufficient capacity and be operated sufficiently to recirculate the pool contents once daily.

*These figures may not correspond to results obtained with waters of a different type.

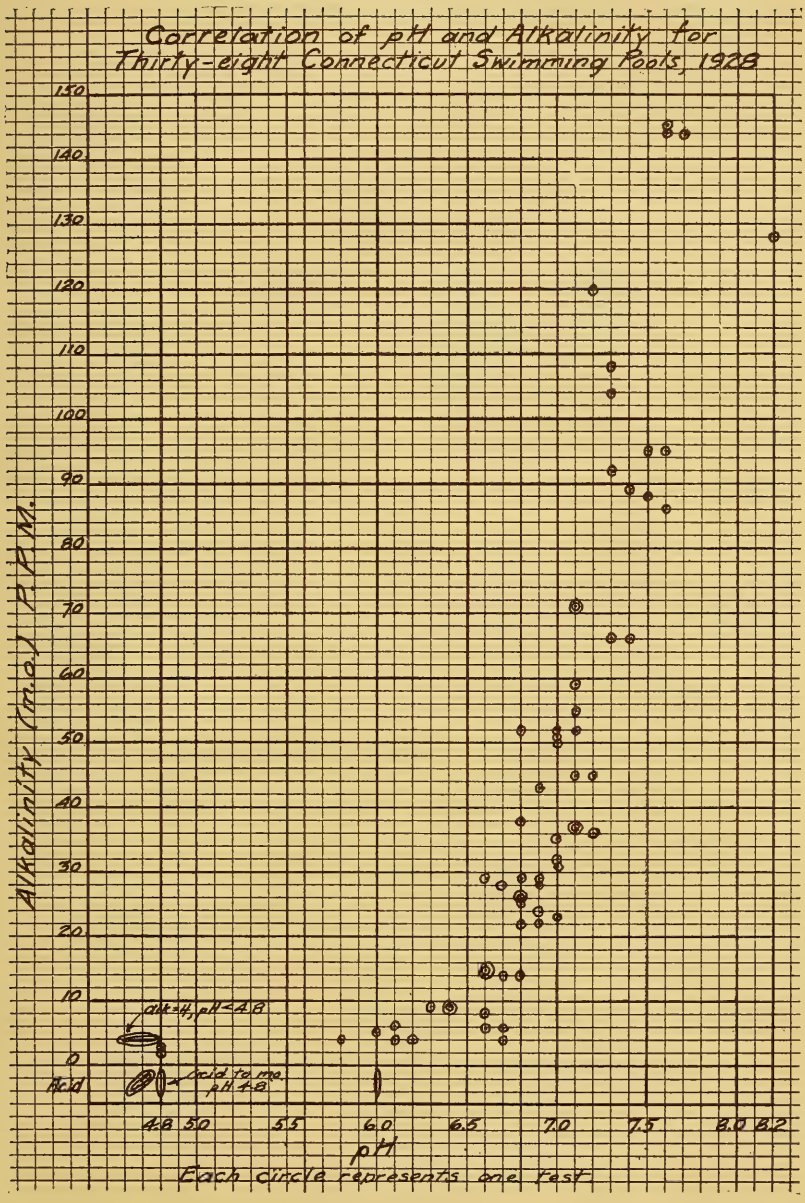

Fig. 2 Correlation of Hydrogen for Concentration and Alkalinity for Pools Examined

Fill and draw pools without re-circulation systems are usually drawn off at intervals of one day to a week.

Other Operating Features

Space will not permit a complete discussion of other operating features and these have been already discussed in a previous bulletin. Filters should usually be washed daily, in accordance with the manufacturers' instructions. Hair traps should be kept clean. Pumping equipment should be maintained in repair. Visible scum should be immediately skimmed from the surface of the water. Sediment in the bottom of the pool is removed by brushing or vacuum. Scouring and scrubbing of the pool sides, bottom, troughs, etc., is often necessary. Pre-cleansing baths by bathers before use of the pool are, of course, always necessary.

Summary

The 1928 survey of indoor swimming pools in Connecticut suggests the need for more supervision by local and state authorities. It is hoped that arrangements can be made with local health officers whereby samples for tests for bacteria, hydrogen ion concentration and alkalinity, can be collected from the inlet and outlet end of each pool at intervals of about two weeks and sent to approved local laboratories or the Department laboratory for analysis. The collection of samples by the local health officers instead of by the swimming pool operators would insure that samples will represent varying conditions.

Each swimming pool should have an intelligent supervisor and equipment to make tests for residual chlorine and for alkalinity or hydrogen ion concentration or both. These tests should be made at least daily and more often until it is definitely assured that proper results are being secured. It should be borne in mind that on account of varying conditions of swimming pools and varying bathing loads, it is difficult to fix on definite chemical dosages satisfactory at all times. Unless frequent tests are made, the residual chlorine or alkalinity may continually build up or disappear.

With the establishment of a regular sampling schedule for the Connecticut pools and daily tests for residual chlorine and for alkalinity or hydrogen ion concentration, it is felt that the standard of the Connecticut pools can be raised to a high plane.

YOUR CHILD IS WHAT YOU MAKE HIM
INFERIORITY FEELINGS

By Winifred W. Arrington, A.B., M.S.S.

This CHILD lacks confidence. He is shy with other children and stays by himself.

This child's **Parents** may have no interests outside the home.

They may demand constant companionship from their child and keep other friends away.

They may ridicule or disapprove activities which their child begins.

They may refuse his requests.

They may expect him to do more than he is able.

They may ignore him.

They may dwell on his failings.

They may call him "dumb", tell him others are brighter, and more likeable.

They destroy their child's confidence and make him feel inferior.

Inferiority Feelings Begin at Home

"Will you look at Jack. He thinks he can make an airplane!"

Jack's father, amused by his son's clumsy efforts at carpentry, and calling on others to share his amusement, is guilty of a crime against a defenceless individual. This father enjoys his joke too heartily to see the crestfallen look on his boy's face, or to notice that after Uncle Bob or Uncle John have joined in the fun, Jack slips away and is not seen again until dinner time. The father is able to dismiss the matter quickly from his mind, and it makes

no impression on him that Jack does not again try to "make things." Some day after giving Jack a present of a tool chest perhaps, he may even blame the boy for lack of interest.

Parents too little consider the weight that their opinion carries. To the child adults are superior beings whose word and thought matter tremendously. They are the embodiment of authority and wisdom. When they ridicule, the child's interest fades, and if it is a spontaneous creative activity which causes comment, the outcome is disastrous. The attack then falls heavily on the child's confidence and self-esteem. It is the exceptional boy who, in Jack's place, flings back, "I **can** make an airplane. You just wait. I'll show you." The average boy is cut to the heart and it takes surprisingly few such rebuffs to deal a permanent wound to the faith he has in his own ability.

But thoughtless ridicule is only one of the parental sins against a child's self-faith. Oftentimes, without realizing his actual capacity and tastes, fathers and mothers ask more of a child than he is able to perform, or a different type of achievement than he is fitted for. They try to force square pegs into round holes—make college men of natural mechanics, or business men of born students. They are apt to take a negative view and emphasize the child's failures to the exclusion of his successes. Not understanding his point of view, they thwart him in various ways, as for example, by denying him even simple and reasonable requests. These denials are many times a matter of habit. So much so that parents do well to examine themselves frequently, asking: "Is there any logical reason why I should refuse Mary this?" or "Is this perhaps a question of Jack's real good?"

Worst offence of all, thoughtless parents may make a child afraid of people. If they insist upon keeping him too closely at home, confining him to their own society, they destroy his social poise. Children naturally congregate, and the child who is forbidden the expression of his social impulses grows queer. Parents whose own interests are limited to the home are especially at fault in this instance. They obtain great satisfaction from contact with and devotion from their child. But they deprive him of something that is vital to his development. Because he feels ill at ease, he soon imagines himself inferior to others, and in consequence aquires first a fear of strangers, and then a genuine dislike. Not infrequently, this antagonism forms a link in the chain that leads to mental breakdown.

Every child needs wholesome companionship in abundance. Deprived of it, he wilts like a plant that is denied sunlight. He needs praise and encouragement, too, and a chance at success. Without them, he is likely to become introverted—turned in upon himself. Insane patients are often recruited from turned-in individuals.

NEWS NOTES FROM THE FIELD

Physicians Licensed from June to September 5.

Bethel, Solley, Frank Deming, 49 Elm Street.
Bridgeport, Leonard, Bernard W., 1142 Fairfield Ave.
Mooney, Sydney, 132 Clinton Ave.
Oesau, Harold Thomas, 173 Stillman Street.
Turkus, Edward Newton, Huntington, R.F.D. No. 3, Box 127.
Wild, William Francis, 1705 North Ave.
Bristol, Nestos, Peter A., Covington Arms, Main Street.
Danbury, Mayerc.k, John Joseph, 270 Main Street.
Greenwich, Miller, John, 63 North Street.
Hartford, Kalett, Joseph, 935 West Blvd.
Patterson, Frederic A., Hartford Hospital.
Meriden, Carrozzella, John Christy, 156 Grove Street.
Pierson, Abraham Louis.
Middle Haddam, Catlin, Robert J.
New Britain, Blogoslaski, Walter Joseph, 20 Orange Street.
New Haven, Fiskio, Peter William, 19 Madison Street.
Hughson, Donald Thomas, New Haven Hospital.
Mongillo, Frank, 844 Elm Street.
Thomas, Merrick Dowdell, 256 Sherman Ave.
So. Manchester, Levy, Harold H., Memorial Hospital.
Stamford, Hertzberg, Reinhold Frederick, 40 South Street.
Thomaston, Danaher, Thomas Joseph, R.F.D. No. 1.
Waterbury, Little, Milton Frederick, Waterbury Hospital.
Romaniello, Rocco John, 120 Eastern Ave.
West Hartford, Sherwood, William Davies, 50 Farmington Ave.
Yalesville, VanLeuvan, James Sipple, Hartford Hospital.

Midwife.

New Haven, Distasio, Margarita, 74 So. Orangs Street.

Changes Among Health Officers.

Charles P. Roraback, Esq., of Torrington has been appointed health officer for Litchfield County succeeding William W. Bierce, Esq.

Litchfield County Health Officer has appointed Henry Turrill, M.D., to succeed E.W. Bull as health officer of Kent.

Hartford County Health Officer, Daniel A. Markham, Esq., has appointed Adolph W. Veits, health officer of East Granby.

New Haven County Health Officer, J. Frederick Baker, Esq., has appointed William H. O'Neil, M.D., health officer of Ansonia to fill the vacancy caused by the death of Dr. Goldstein. He has also appointed S. P. Taylor, M.D. of North Haven as Health Officer of North Branford to fill the unexpired term of I. E. Brainard, M. D.

New London County Health Officer, Hibberd R. Norman, Esq., has announced the appointment of Miss Frances C. Kingberger of Fitchville to act as health officer of Preston.

New England Health Institute.

September 24, 25 and 26 have been set aside for the Sixth New England Health Institute which is to be held in Burlington, Vermont. Charles F. Dalton, M.D., Secretary of Vermont Department of Public Health is in immediate charge of the Institute which is to be jointly sponsored by state health departments of New England, United States Public Health Service, New England

Colleges and voluntary health organizations. The program offers much of interest to health workers and if the past institutes can be judged, this health school will be another of the successful undertakings of New England health workers.

Laboratories.

Two new laboratories have been approved since the last announcement of approved laboratories for bacteriological and milk examinations. The Greenwich Hospital Laboratory has been approved for bacteriological examinations of milk and cream while under the direction of Louise D. Larimore, M.D., Pathologist. Dr. Larimore now holds a license issued by the State Dairy and Food Commissioner for the bacteriological testing of milk and cream. This laboratory had previously been approved as a diagnostic bacteriological laboratory.

The laboratory of the Hartford Isolation Hospital has been approved as a diagnostic laboratory while under the direction of C. L. Thenebe, M.D., Superintendent and Resident Physician.

Visitors.

Edward Francis, M.D. of the U.S. Hygiene Laboratory, Washington, D.C., and William Rudolphs, Ph. D. have been recent visitors at the Bureau of Laboratoies of the State Department of Health. Dr. Francis is well known for his work on tularemia and has recently been awarded the gold medal by the American Medical Association for his outstanding work on this subject. Dr. Rudolphs is in charge of New Jersey Sewage Experiment Station.

Health Exhibiting.

The State Department of Health is once again sending a comprehensive health exhibit into several of the towns of the state following the agricultural fair circuit. Thousands have already visited the state fair in Hartford and as this bulletin goes to press plans are in progress for sending the health tent to

Woodstock	September	11-13
Woodbridge	"	14-15
Brooklyn	"	18-20
Mt. Carmel	"	22
Guilford	"	26
Chester	"	28
Plymouth	"	29
Durham	October	3- 4
Stafford	"	11-13

During the five years that the State Department of Health has been exhibiting at fairs, 58 fairs have been attended, 13 in 1923, 17 in 1924, 13 in 1925, 7 in 1926, and 8 in 1927. Of these 13 have been attended once, 8 twice, 7 three times, and 2 four times. More than 100,000 people have been reached during this time with the health message, and more than 150,000 health leaflets have been distributed.

Vital Statistics

MONTH OF JULY

Totals for the First Seven Months of the Year 1926, 1927, 1928

Year	Births	Birth Rate*	Marriages	Mar. Rate*	Deaths	Death Rate*
1926	17,345	19.1±.1	6,627	7.3±.1	11,441	12.6±.1
1927	17.077	18.4±.1	6,699	7.2±.1	10.226	11.1±.1
1928	15,855	16.8±.1	5,698	6.1±.1	10,927	11.6±.1

*Per 1,000 population, annual basis

The figures above show a distinct drop in the birth rate and marriage rate. This decline has been evident, in both rates, for a considerable period. The death rate is distinctly increased over the record year of 1927, but considerably lower than 1926.

Births

The births for the month total 2,074, with records from one of the large towns delayed unavoidably. These delayed records will increase the total by at least 200. Therefore the rate of 15.4 births per 1,000 of the population for the month must be used cautiously.

Each month a comparison is made of the increases in the number of births over the same month of last year and those increases of 10 or more are noted. This month there are only 3 such towns—that is. towns which show an increase over 1927. They are:

Greenwich ..... 17±9 Stamford ..... 18±14
Waterbury ..... 12±16

The numbers immediately following the towns show the increase and also what might have been expected to result from pure chance. The increase for Greenwich alone stands out as significant.

There were 84 stillbirths this year, as compared with 72 a year ago. This is not an alarming increase.

Deaths

Records of 1338 deaths were received in the month, an increase of 32 over the 1306 sent in a year ago. The death rate is the same, 9.9 per 1,000 population in both years. This rate is not the lowest to appear in the last 6 years. In 1925 the rate was 9.5. If the present year is to approach the record of last year,

the rate must be lower by a considerable amount each remaining month. So far the year has had 701 more deaths than 1927 or an average of 100 a month in excess.

Below is given an analytic comparison of 1928 and 1927 for a selected list of causes of death, to show the increase and decrease.

Cause of Death	1928	1927	Increase	Decrease
Typhoid fever	0	1±1	....	1±1
Measles	9±3	2±1	7±3	....
Scarlet fever	2±1	0	2±1	....
Whooping cough	4±2	0	4±2	....
Diphtheria	2±1	7±3	....	5±3
Influenza	9±3	10±3	....	1±4
Poliomyelitis	0	0	....	....
Epidemic encephalitis	3±2	0	3±2	....
Cerebrospinal meningits	1±1	2±1	....	1±2
Tuberculosis, pulmonary	81±9	69±8	12±12	....
Tuberculosis, other forms	13±4	13±4	....	....
Cancer	136±12	137±12	....	1±16
Diabetes mellitus	28±5	23±5	5±7	....
Diseases of the heart	264±16	222±15	42±22	....
Broncho pneumonia	26±5	30±5	....	4±7
Lobar pneumonia	21±5	25±5	....	4±7
Pneumonia undefined	0	1±1	....	1±1
Diarrhea and enteritis, under 2	5±2	17±4	....	12±5
Nephritis	93±10	118±11	....	25±14
Puerperal diseases	14±4	10±3	4±5	....
Suicide	13±4	20±5	....	7±6
Accident	125±11	110±10	15±15	....
Other causes	489±24	489±24	....	....
Totals	1338±36	1306±36	94	62

Reviewing first the increases, the one of chief interest is the record for measles. During July, 798 cases were reported, by far the largest number since 1923. The average runs about 300 for a month. Evidently measles is going to contribute considerably to the mortality for the year. The increase for deaths due to diseases of the heart is on the borderland of significance.

Other increases are not shown in the limited list above but special count reveals the fact that 37 persons lost their lives by accidental drowning as compared with 20 a year ago. Included also in the accidental deaths are 36 deaths due to the automobile with 34 a year ago. This is a total of 73 deaths this year, all of which are unnecessary and preventable. Were they excluded, the mortality for the month would be well below the record for last year.

Two decreases stand out as significant—for diphtheria and diarrhea under 2.

A table showing the increases and decreases in the accumulated totals for the year follows:

Cause of Death	1928	1927	Increase	Decrease
Typhoid fever	6	7	....	1
Measles	54	19	35	....
Scarlet fever	21	15	6	....
Whooping cough	69	27	42	....
Diphtheria	50	52	....	2
Influenza	267	234	33	....
Poliomyelitis	4	1	3	....
Epidemic encephalitis	14	8	6	....
Cerebrospinal meningitis	9	7	2	....
Tuberculosis, pulmonary	602	597	5	....
Tuberculosis, other forms	86	84	2	....
Cancer	972	965	7	....
Diabetes mellitus	*	*	....	....
Diseases of the heart	1630	1724	....	94
Broncho pneumonia	554	403	151	....
Lobar pneumonia	629	486	143	....
Pneumonia, undefined	22	13	9	....
Diarrhea and enteritis under 2	50	82	....	32
Nephritis	*	*	....	....
Puerperal diseases	104	101	3	....
Suicide	137	116	21	....
Accident	652	605	47	....
Totals	5932	5546	515	129

*Not available

The above list speaks for itself. The one encouraging item is the reduction in infant diarrhea.

FOR SIX YEARS—JULY, 1928

CONNECTICUT	1923	1924	1925	1926	1927	1928
BIRTHS	2742	2859	2636	2640	2506	2074
Birth Rate	22.3	22.8	20.7	20.3	18.9	15.4
MARRIAGES	970	952	855	956	853	896
Marriage Rate	7.9	7.6	6.7	7.4	6.5	6.7
DEATHS	1200	1199	1214	1336	1306	1338
Death Rate	9.8	9.6	9.5	10.3	9.9	9.9
COMMUNICABLE DIS.* DEATHS	119	109	111	102	91	99
Per Cent to Total Deaths	9.9	9.2	9.1	7.6	7.0	7.4
DEATHS UNDER 1 YEAR	142	149	115	135	132	101
Rate Per 1,000 Births	55.3	56.2	46.3	56.1	54.9	42.7

*Includes Typhoid Fever, Measles, Scarlet Fever, Whooping Cough, Diphtheria, Tuberculosis Pulmonary, Cerebrospinal Meningitis, Poliomyelitis, Influenza.

Statistics

July, 1928

State of Connecticut	Population Est. as of July 1, 1928 Based on U. S. Census	TOTALS				DEATH RATES			Typhoid Fever (1)	Measles (7)	Scarlet Fever (8)
		Births	Stillbirths	Marriages	Deaths	Deaths under 1 year	All Causes (per 1,000 pop.)	Children under 1 year (per 1,000 births)			
	1,613,874	2074	84	896	1338	101	9.9	42.7	.....	9	2
Ansonia	19,805	22	.....	6	20	.....	12.1	.....	.....	1	.....
Branford	7,133	9	.....	3	4	1	6.7	117.6	.....	.....	.....
Bridgeport	179,163	.....	14	88	116	10	7.8	38.4	.....	1	.....
Bristol	26,820	59	5	20	16	1	7.2	18.6	.....	.....	.....
Danbury	21,931	38	1	11	32	1	17.5	20.8	.....	.....	.....
Derby	13,194	13	3	3	11	2	10.0	56.6	.....	.....	.....
East Hartford	14,311	41	.....	6	16	4	13.4	360.8	.....	1	.....
East Haven	5,030	7	1	2	8	.....	19.1	.....	.....	.....	.....
Enfield	13,445	16	1	13	7	.....	6.2	.....	.....	.....	.....
Fairfield	16,091	14	.....	3	12	.....	8.9	.....	.....	.....	.....
Glastonbury	6,288	6	.....	3	10	1	19.1	226.4	.....	1	.....
Greenwich	26,956	48	1	73	18	2	8.0	52.2	.....	.....	1
Groton	11,607	12	.....	8	13	.....	13.4	.....	.....	.....	.....
Hamden	11,002	28	.....	5	10	.....	10.9	.....	.....	.....	.....
Hartford	172,288	278	13	90	108	11	7.5	31.7	.....	3	.....
Killingly	9,517	14	.....	8	14	1	17.7	69.0	.....	.....	.....
Manchester	22,478	34	.....	8	22	1	11.7	29.5	.....	.....	.....
Meriden	37,085	54	1	22	33	1	10.7	15.2	.....	.....	.....
Middletown	23,000	36	.....	14	19	1	9.9	19.6	.....	.....	.....
Milford	15,273	14	.....	5	13	1	10.2	80.0	.....	.....	.....
Naugatuck	17,069	17	.....	15	7	.....	4.9	.....	.....	.....	.....
New Britain	72,654	113	4	29	55	9	9.1	68.8	.....	.....	.....
New Haven	187,705	249	11	103	139	8	8.9	27.0	.....	1	.....
New London	30,770	42	3	25	21	1	8.2	16.0	.....	.....	.....
Norwalk	30,537	36	2	22	27	2	10.6	34.8	.....	.....	.....
Norwich	30,762	46	3	20	28	4	10.9	66.4	.....	.....	.....
Plainfield	8,909	3	.....	2	13	1	17.5	95.2	.....	.....	.....
Plainville	5,191	7	.....	3	6	1	13.9	214.3	.....	.....	.....
Plymouth	6,554	9	.....	3	3	.....	5.5	.....	.....	.....	.....
Putnam	9,334	12	1	9	9	1	11.6	60.0	.....	.....	.....
Seymour	8,526	5	.....	3	9	1	12.7	190.4	.....	.....	.....
Shelton	12,000	15	1	7	10	2	10.0	203.4	.....	.....	.....
Southington	10,123	18	.....	3	11	.....	13.0	.....	.....	.....	.....
Stafford	5,490	8	.....	7	6	.....	13.1	.....	.....	.....	.....
Stamford	49,923	105	1	42	41	3	9.9	29.5	.....	.....	.....
Stonington	11,152	10	1	8	4	1	4.3	79.5	.....	.....	.....
Stratford	17,451	10	1	5	11	.....	7.6	.....	.....	.....	.....
Thompson	5,252	5	1	7	1	.....	2.3	.....	.....	.....	.....
Torrington	25,453	39	1	7	22	2	10.4	51.8	.....	.....	.....
Vernon	8,751	16	.....	6	11	1	15.1	77.4	.....	.....	.....
Wallingford	12,747	13	.....	7	10	1	9.4	123.7	.....	.....	.....
Waterbury	107,908	139	6	37	62	7	6.9	40.7	.....	1	.....
Watertown	7,732	5	1	4	10	1	15.5	142.8	.....	.....	.....
West Hartford	12,763	35	2	6	16	3	15.0	238.5	.....	.....	.....
West Haven	19,334	38	.....	9	19	3	11.8	102.6	.....	.....	.....
Westport	5,862	10	.....	3	4	.....	8.2	.....	.....	.....	.....
Wethersfield	5,387	8	.....	1	4	.....	8.9	.....	.....	.....	.....
Winchester	9,144	9	.....	3	9	.....	11.8	.....	.....	.....	.....
Windham	14,509	25	.....	7	10	.....	8.3	.....	.....	.....	.....
Windsor	6,880	14	.....	1	10	.....	17.4	.....	.....	.....	.....
Other States		31	.....	.....	37	1	.....	.....	.....	.....	.....
Towns under 5,000	205,585	239	5	101	211	10	12.3	52.1	.....	.....	1

for the month of July, 1928

DEATHS FROM IMPORTANT CAUSES

Whooping Cough (9)	Diphtheria (10)	Influenza (11)	Poliomyelitis (22)	Epidemic Encephalitis (23)	Meningitis Cerebrospinal (24)	Tuberculosis-Pulmonary (31)	Tuberculosis-Other Forms (32-37)	Cancer (43-49)	Diabetes Mellitus (57)	Diseases of the Heart (87-90)	Pneumonia-Broncho 100 (1)	Pneumonia-Lobar 101 (1)	Pneumonia-undefined 101 (2)	Diarrhea and Enteritis under 2 (113)	Nephritis (128-129)	Puerperal Diseases (143-149)	Suicide (165-174)	Accident (175-189)
4	2	9	.....	3	1	81	13	136	28	264	26	21	.....	5	93	14	13	125
.....	.....	.....	.....	1	.....	2	.....	1	.....	3	.....	.....	.....	.....	1	1	1	1
.....	.....	.....	.....	.....	.....	.....	.....	1	.....	2	.....	.....	.....	.....	.....	.....	.....	.....
1	1	.....	.....	.....	1	9	3	14	2	30	.....	1	.....	2	6	1	.....	8
.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1	1	.....	.....	.....	3	.....	.....	1
.....	.....	1	.....	.....	.....	1	.....	4	3	7	.....	1	.....	.....	2	.....	.....	4
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	2	.....	.....	3
.....	.....	.....	.....	.....	.....	.....	.....	4	.....	4	.....	.....	.....	.....	2	.....	.....	1
.....	.....	1	.....	.....	.....	1	.....	1	.....	1	.....	.....	.....	.....	.....	1	1	2
.....	.....	.....	.....	.....	.....	1	.....	1	.....	1	.....	.....	.....	.....	1	1	.....	4
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	.....	.....	.....	.....	.....	.....	.....	2
.....	.....	1	.....	.....	.....	.....	.....	1	.....	2	.....	.....	.....	.....	5	.....	.....	2
.....	.....	.....	.....	.....	.....	.....	.....	1	.....	8	.....	.....	.....	.....	.....	1	.....	1
.....	.....	.....	.....	.....	.....	1	1	2	.....	2	.....	.....	.....	.....	1	.....	.....	.....
.....	.....	1	.....	1	.....	9	1	11	1	19	5	2	.....	1	8	.....	1	9
.....	.....	.....	.....	.....	.....	1	.....	1	.....	3	.....	.....	.....	.....	.....	.....	1	2
1	.....	.....	.....	.....	.....	4	.....	1	.....	6	.....	.....	.....	.....	2	.....	1	1
1	.....	.....	.....	.....	.....	1	.....	4	1	8	.....	1	.....	.....	1	.....	.....	3
.....	.....	.....	.....	.....	.....	3	.....	3	.....	4	1	1	.....	.....	2	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	1	.....	4	.....	.....	.....	.....	.....	.....	.....	2
.....	.....	.....	.....	.....	.....	2	.....	2	.....	1	.....	.....	.....	.....	.....	.....	.....	1
.....	.....	.....	.....	.....	.....	4	.....	7	3	8	3	.....	.....	.....	4	1	.....	2
.....	.....	1	.....	.....	.....	5	3	16	6	26	3	5	.....	.....	10	2	.....	8
.....	.....	.....	.....	.....	.....	1	.....	2	.....	4	2	1	.....	.....	2	.....	1	.....
.....	.....	.....	.....	.....	.....	.....	.....	3	1	4	1	.....	.....	.....	4	.....	.....	3
1	.....	2	.....	.....	.....	2	.....	5	1	2	2	1	.....	.....	.....	.....	1	3
.....	.....	.....	.....	.....	.....	.....	.....	2	.....	3	.....	.....	.....	.....	.....	2	.....	2
.....	.....	.....	.....	.....	.....	1	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	2
.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	1	2	.....	.....	.....	.....	2	.....	.....	1
.....	.....	.....	.....	.....	.....	.....	.....	1	1	2	.....	.....	.....	.....	1	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....	.....	.....	.....	1	.....	.....	1
.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	2	.....	1	3
.....	.....	.....	.....	.....	.....	1	.....	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	2	.....	6	.....	4	.....	2	.....	.....	1	1	1	6
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
.....	1	.....	.....	.....	.....	1	.....	1	.....	3	.....	.....	.....	.....	1	1	.....	2
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	1	2	3	1	2	2	.....	.....	.....	1	.....	.....	1
.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1	.....	1	.....	.....	1	.....	.....	3
.....	.....	.....	.....	.....	.....	2	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	1	.....	.....	.....	5	.....	8	1	14	1	2	.....	.....	4	.....	.....	4
.....	.....	.....	.....	.....	.....	2	1	.....	.....	1	.....	.....	.....	1	1	.....	.....	.....
.....	.....	1	.....	.....	.....	.....	.....	1	.....	2	2	.....	.....	1	1	1	.....	.....
.....	.....	.....	.....	.....	.....	1	.....	2	.....	1	.....	1	.....	.....	1	.....	.....	3
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	1	.....	1	.....	3	.....	.....	.....	.....	2	.....	.....	1
.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....	.....	.....	.....	1	1	.....	2
.....	.....	.....	.....	.....	.....	4	.....	1	.....	11	.....	1	.....	.....	5	.....	.....	.....
.....	.....	.....	.....	1	.....	9	.....	18	3	51	3	1	.....	.....	11	.....	4	27

Occupational Diseases

OCCUPATIONAL DISEASES

For Month of August, 1928

ETIOLOGICAL FACTORS

Allergia (Vegetable dust)	
Coryza and conjunctivitis	14
Cement Dust	
Eczema	1
Carbon Disulphid	
Conjunctivitis	1
Lead	
Systemic	2
Mercury	
Dermatitis	26
Conjunctivitis	5
	48

The Industrial Physician

Industrial medicine in all that it applies has become a specialty worthy of the entire time of a well-trained physician. The time is rapidly passing when managers of industry are content with the services of a doctor who feels he can profitably do a little industrial work as an adjunct to a more lucrative practice.

The industrial physician knows that the effect upon the health of processes and materials necessary to industry can be controlled and that there is in consequence a vast preventive program involved. He knows that minimum amounts in which many of these substances may be present without involving a hazard to the workers and recognizes it as part of his work to instigate methods which will keep the amount below that which causes toxic effects. He knows the effects of some of these substances may be demonstrated by proper laboratory methods before symptoms appear, and utilizes this fact to control the effect of processes upon his patients.

He is concerned not so much with curing as preventing and as such is a conserver of health, a saver of time and a good business investment.

Laboratories

SUMMARY OF BUREAU ACTIVITIES

AUGUST, 1928

	DIAGNOSTIC					
	+	—	?	Unclassified	Specimens	Examinations
Typhoid	4	258	3	....	264	265
Paratyphoid A	....	265	....	....	....	265
Partyphoid B	....	265	....	....	....	265
Diphtheria	34	633	....	....	339	667
Diphtheria Virulence	3	8	....	....	8	11
Vincent's Angina	4	501	....	....	2	505
Hemolytic Streptococci	7	499	....	....	....	506
Tuberculosis	22	156	....	....	178	178
Syphilis	539	2905	72	....	2161	3516
Gonorrhea	23	112	....	....	135	135
Pneumonia	1	....	....	....	1	1
Malaria	....	7	....	....	7	7
Rabies	2	3	....	....	4	5
Glanders	....	1	....	....	1	1
Specials	7	69	....	63	15	139
					3115	6466

CHEMICAL AND BACTERIOLOGICAL		
Milk samples	504	947
Cream samples	3	6
Water samples	599	866
Sewage samples	712	714
Clinical thermometers	1447	1445
Totals	6380	10444
Total laboratory procedures		21897

Water Analysis Exhibit

Much interest was shown in the laboratory exhibit at the State Fair at Hartford. Here were displayed the various color tests in water analysis showing by contrasting colors and bacteriological procedures safe and unsafe water.

Preventable Diseases

INCIDENCE OF DISEASE FOR MONTH OF AUGUST, 1928

(As compared with previous years)

A comparison of the daily morbidity reports received during the month of August, 1928, with the corresponding month for the years 1923, 1924, 1925, 1926 and 1927.

	Average 1923-1927 for Aug.	Mean 1923-1927 for Aug.	1923	1924	1925	1926	1927	1928
Cerebrospinal meningitis ..	4	3	3	10	3	1	1	6
Diphtheria	82	80	124	91	64	50	80	47
Encephalitis epidemic	3	3	5	5	1	1	3	2
Measles	72	47	114	38	47	121	42	122
Poliomyelitis	25	18	18	36	14	5	52	13
Scarlet fever	66	71	87	81	71	53	38	30
Smallpox	3	0	12	1	....	....	....	....
Typhoid fever	36	41	51	45	41	28	13	19
Tuberculosis, pulmonary ..	115	120	133	125	100	120	96	127
Whooping cough	201	191	229	148	323	113	191	266

A comparison of the morbidity of these diseases for the two preceding months, June, 1928 and July, 1928 with the August, 1928 record is as follows:

	June 1928	July 1928	Aug. 1928
Cerebrospinal meningitis	7	4	6
Diphtheria	74	51	47
Encephalitis epidemic	2	2	2
Measles	1409	798	122
Poliomyelitis	3	5	13
Scarlet fever	145	66	30
Smallpox	5	....	....
Typhoid fever	4	4	19
Tuberculosis, pulmonary	162	138	127
Whooping cough	492	356	266

Cases of Certain Other Reportabe Diseases

Anthrax	1	Septic sore throat	6
Chickenpox	23	Tetanus	1
Dysentery bacillary	3	Undulant fever	1
Encephalitis epidemic	2	Chancroid	1
German measles	7	Gonorrhea	136
Influenza	11	Syphilis	166
Malaria	1		
Mumps	39	Total	399
Paratyphoid fever	1		

Cases of Certain Reportable Diseases

August, 1928

	Population Est. as of July 1, 1927	Typhoid Fever	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Meningitis Cerebrospinal	Poliomyelitis	Tuberculosis Pulmonary	Tuberculosis Other Forms	Pneumonia Lobar	Pneumonia Broncho-	Other Com. Diseases
State Total	**1,613,874**	**19**	**122**	**30**	**266**	**47**	**6**	**13**	**127**	**24**	**36**	**46**	**399**
NEW HAVEN CO.	**483,603**	**10**	**17**	**6**	**91**	**4**		**3**	**56**	**19**	**10**	**5**	**117**
New Haven	187,705	5	7	3	56	2		1	32	16	4	1	64
Waterbury	107,908		4	1	3	1		1	11	1	5	4	15
Meriden (city and town)	37,085	1			15				5	2	1		5
Ansonia	19,805		1	1				1	2				
West Haven	19,334			1	3				4				6
Naugatuck	17,069												2
Wallingford (town and boro)	12,747												3
Milford	15,273	1											1
Derby	13,194								1				
Hamden	11,002				3	1			1				14
Branford (town and boro)	7,133												2
Seymour	8,526												1
Towns under 5,000	21,792	3	5		11								4
FAIRFIELD CO.	**387,138**	**4**	**22**	**5**	**67**	**15**	**2**	**2**	**20**	**1**	**6**	**14**	**61**
Bridgeport	179,163	2	11	1	17	3	1	1	13		3	12	29
Stamford (city and town)	49,923		2	1	30				1				7
Norwalk	30,537	1	2		1						1		1
Danbury (city and town)	21,931					1			1		1		3
Greenwich (town and boro)	26,956			1	18	2			2	1	1	1	5
Stratford	17,451		1			2							
Fairfield	16,091		2		1	5							
Shelton	12,000					1							5
Westport	5,862							1					1
Towns under 5,000	27,224	1	4	2		1	1		3			1	10
HARTFORD CO.	**411,342**	**4**	**52**	**8**	**71**	**20**	**2**	**8**	**35**	**3**	**15**	**19**	**147**
Hartford	172,288	3	21	3	35	14	1	2	24	3	4	5	103
New Britain	72,654		2	1	6	1		6	3		8	9	13
Bristol (city and town)	26,820				11	1			1			1	6
Manchester	22,478	1	1	2					1		1		3
Enfield	13,445		5				1						1
East Hartford	14,311				2				1			1	5
Southington (town and boro)	10,123			1	2						1		3
West Hartford	12,763		3		3	1			2			1	4
Windsor	6,880		2			1			1				1
Glastonbury	6,288		2		1							1	
Wethersfield	5,387				3				1		1	1	6
Plainville	5,191												
Towns under 5,000	42,714		16	1	8	2			1				2
NEW LONDON CO.	**116,306**		**1**	**4**	**11**	**3**	**2**		**4**		**2**	**3**	**47**
Norwich (city and town)	30,762			1					1				4
New London	30,770			2	3	2					1	1	11
Stonington (town and boro)	11,152												1
Groton (town and boro)	11,607		1		2								1
Towns under 5,000	32,015			1	6	1	2		3		1	2	30
LITCHFIELD CO.	**81,518**		**4**	**2**	**14**	**3**			**5**	**1**	**2**		**4**
Torrington (town and boro)	25,453		1						2	1			
Winchester (inc. Winsted)	9,144												
Plymouth	6,554				5								1
Watertown	7,732		2		7								
Towns under 5,000	32,635		1	2	2	3			3		2		3
WINDHAM CO.	**56,717**		**13**	**1**	**3**	**1**					**1**	**1**	**2**
Windham (inc. Willimantic)	14,509												
Putnam (city and town)	9,334		8			1					1		1
Plainfield	8,909												
Killingly (inc. Danielson)	9,517		1		1							1	
Thompson	5,252		2										
Towns under 5,000	9,196		2	1	2								1
MIDDLESEX CO.	**49,372**		**6**		**9**	**1**			**5**			**2**	**15**
Middletown (city and town)	23,000												4
Middletown State Hospital									4				
Towns under 5,000	9,196		6		9	1			1			2	11
TOLLAND CO.	**27,878**	1	**7**	**4**					**2**			**2**	**6**
Vernon (inc. Rockville)	8,751		5						1				
Stafford (town and boro)	5,490												
Towns under 5,000	13,637	1	2	4					1			2	6

TOXIN—ANTITOXIN PREVENTS DIPHTHERIA

Is Your Child
Protected
Against This Disease

Consult Your Physician

If Your Community Has a
High Diphtheria Death Rate,
It is "Behind The Times."

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Connecticut Health Bulletin

"For a Clean State and a Healthy People"

Vol. 42 **October, 1928** **No. 10**

SPECIAL ARTICLES

Branches of Healing Arts Defined

Your Child is What You Make Him—Confidence and Sociability

Selecting Food for the Family

August and September Vital Statistics

STANLEY H. OSBORN, M. D., C. P. H., Commissioner

Issued Monthly by the

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HARTFORD

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MONTHLY HEALTH BULLETIN

Vol. 42 October, 1928 No. 10

BRANCHES OF THE HEALING ARTS DEFINED

While there has been for years in Connecticut a well defined view of what constitutes medical practice among those who have been scientifically trained in its various branches, Connecticut's recent exposure of diploma mills revealed the presence in this state of those who had never received proper training to fit themselves for that branch they attempted to practice.

It was shown at that time what little protection the public had against those would-be practitioners, and so as a safeguard the last two legislatures have passed laws which more explicitly defined the different branches of the healing arts, established more rigid rules as to their scope and limitations and created a basic board, the State Board of Healing Arts.

With the thought that this is of vital interest to the public, certain branches of the healing arts, selected from the State Statutes, are herewith defined.

State Board of Healing Arts

Excerpt from Acts of 1925, Chap. 161. (as amended in 1927, Chap. 296). Section three of chapter 161 of the public acts of 1925 is amended to read as follows: Any person desiring to take an examination to be admitted to practice any branch of the healing arts, or any subdivision thereof, who shall submit to the state board of healing arts evidence satisfactory to said board that he is a person of good moral character, that he was a graduate of a standard approved high school or that he possessed educational qualifications equivalent to those required for graduation by such high school before he began the study of the healing arts and submit evidence to the state board of healing arts that he has met the requirements of the general statutes as to professional training and has, as shown by written examination by said board, a comprehensive knowledge of anatomy, physiology, hygiene, pathology, and diagnosis, upon payment of a fee of five dollars, shall receive from said board a certificate which shall be prerequisite to examination by the Connecticut medical examining board, the Connecticut homeopathic medical examining board, the Connecticut eclectic medical examining board, the state board of osteopathic registration and examination, the state board of chiropractic examiners or the state board of naturopathic examiners. . . . . .

Practice of Medicine and Surgery

Rev. 1918, Sec. 2854. No person shall, for compensation, gain or reward, received or expected, treat, operate or prescribe for any injury, deformity, ailment or disease, actual or imaginary, of another person, nor practice surgery, until he has obtained such certificate of registration as is in section 2855 provided, and then only in the kind or branch of practice stated in said certificate; but this chapter shall not apply to dentists while practicing dentistry only; nor to any person in the employ of the United States government while acting in the scope of his employment; nor to any person who shall furnish medical or surgical assistance in cases of sudden emergency; nor to any person residing out of this state who shall be employed to come into the state to render temporary assistance to or consult with any physician or surgeon who has been registered in conformity with the provisions of this chapter; nor to any physician or surgeon then actually residing out of this state who shall be employed to come into this state to treat, operate, or prescribe for any injury, deformity, ailment or disease from which any person is suffering at the time when such non-resident physician or surgeon is so employed; nor to any chiropodist or clairvoyant who does not use in his practice any drugs, medicines or poison; nor to any person practicing the massage method, or Swedish movement cure, sun cure, mind cure, magnetic healing, or Christian science; nor to any other person who does not use or prescribe in his treatment of mankind drugs, poisons, medicines, chemicals or nostrums.

Excerpt from Rev. 1918, Sec. 2855. (as amended in 1925, Chap. 267, and in 1927, Chap. 317.) Sec. 1. Section 2855 of the general statutes as amended by section one of chapter 267 of the public acts of 1925 is amended to read as follws: No person shall receive a certificate of registration under the provisions of section 2854 of the general statutes until he shall have passed an examination before one of the examining committees appointed for such purpose by the governor, except as hereinafter provided, and until he shall have filed with the state department of health duplicate certificates signed by a majority of the examining committee, which certificates shall include a statement that the person named therein has been examined and found qualified to practice either medicine or surgery. . . . . .

Practice of Osteopathy

Excerpt from Rev. 1918, Sec. 2865. (as amended in 1925, Chap. 251). Section 1. No person shall engage in the prac-

tice of osteopathy until such person shall have obtained a license from the board of osteopathic registration and examination. All applications for such license shall be in writing signed by the applicant and upon blanks furnished by said board, which shall set forth such facts concerning the applicant as said board shall require. No person shall be eligible to examination until he shall present to the board by which he is to be examined satisfactory evidence that he has received a diploma or certificate of graduation from some reputable college of osteopathy recognized by the laws of the state wherein the same is situated, which college shall have a course of instruction which shall require four college years of thirty-six weeks each. . . . . .

Sec. 2. The license provided for in section 2865 of the general statutes shall not authorize the holder thereof to perform surgical operations unless he shall pass a satisfactory examination in surgery before the Connecticut medical examining board, to which examination his license under the provisions of this act privileges him, provided he shall meet all requirements as to length of service in hospitals or other requirements which may be especially demanded of applicants to practice surgery.

Practice of Chiropractic

Rev. 1918, Sec. 2878. For the purpose of this chapter, the practice of chiropractic shall be understood to be the adjustment by hand of any or all of the articulations of the human vertebral column.

Rev. 1918, Sec. 2869 (as amended in 1923, Chap. 30 and in 1925, Chap 221.

Sec. 2. Section 2870 of the general statutes is amended to read as follows: With the exception of vertebral palpation and adjusting, examination shall be in writing, the subjects of which shall be as follows: Anatomy, physiology, symptomotology, histology, vertebral palpation, principles of chiropractic and adjusting, chemistry, hygiene, pathology, dietetics and diagnosis. A license shall be issued to each applicant therefor who shall pass such examination and who shall have met all other requirements of the board. Any chiropractor who shall have complied with the provisions of chapter 150 of the general statutes may adjust by hand any articulations of the spinal column, but shall not prescribe for or administer to any person any medicine or drug included in materia medica or perform any surgery or practice obstetrics or osteopathy.

Practice of Natureopathy

Acts of 1923, Chap. 245. (Sec. 8 as amended in 1923, Chap. 281, and in 1927, Chap. 180.) For the purpose of this act, the practice of natureopathy shall mean the practice of the psychological, mechanical and material sciences of healing as follows: The psychological sciences, such as psychotherapy; the mechanical sciences, such as mechano-therapy, articular manipulation, corrective and orthopedic gymnastics, neuro-therapy, physio-therapy, hydro-therapy, electro-therapy, thermo-therapy, photo-therapy, chromo-therapy, vibrotherapy, concussion and pneumato-therapy and the material sciences, such as diatetics, and external applications; but shall not mean internal medication or the administering of any substance simulating medicine or the form of medicine. Nothing in this act shall be construed as changing, altering or repealing any statute concerning the practice of osteopathy or chiropractic.

Practice of Dentistry

Acts of 1927, Chap. 278.

Sec. 19. Any person who shall own or carry on a dental practice or business or who by himself or by his servants or agents, or by contract with others, shall perform any operation or make examination of, with intent of performing or causing to be performed any operation on the human teeth or jaws, or who shall describe himself by the word "Dentist" or letters "D.D.S." or "D.M.D.", or in other words, letters or title in connection with his name which shall in any way represent such person as engaged in the practice of dentistry, or who shall diagnose or treat diseases or lesions of the human teeth or jaws, replace lost teeth by artificial ones, attempt to diagnose or correct malposition thereof, or give estimates on the cost of treatment, or who shall advertise or permit it to be done by sign card, circular, handbill or newspapers, or otherwise indicate that he, by contract with others or by himself, will perform any of such operations, shall be deemed as practicing dentistry or dental medicine within the meaning of this act.

Dental Hygienist

Excerpt from **Sec. 16.** Any licensed dentist may employ women assistants who shall be known as dental hygienists. Such dental hygienists may remove calcareous deposits, accretions and stains from the exposed surfaces of the teeth and directly beneath the free margin of the gums, but shall not perform any other operation on the teeth, mouth or diseased tissue of the mouth or attempt to make diagnosis of the same. They may operate in any office of any licensed dentist or in any public or private institution under the general supervision of a licensed dentist. . . . . .

Registered Nurse

Excerpt from Rev. 1918, Sec. 2895. No person shall practice professional nursing in this state as a registered nurse without having a certificate of registration. A nurse who has received such certificate shall be styled and known as a "Registered Nurse,"and no other person shall assume such title or use the abbreviation "R.N." or any other words, letters or figures to indicate that the person using the same is such a registered nurse. . . . . .

Rev. 1918, Sec. 2892. (as amended in 1923, Chap. 39.) At the annual meeting of the board of examination and registration of nurses and at such special meetings as said board may deem necessary, notice of each of which meetings shall be given by publication in such newspapers as the board may determine, at least one month previous to such meetings, said board shall examine all applicants for registration under the provisions of chapter 152 of the general statutes to determine their qualifications for the efficient nursing of the sick, and shall decide upon the qualifications of every such applicant and give notice of such decision within three months from the date of such examination. Any person tweny-one years of age or over and of good moral character who shall show to the satisfaction of the board that he or she is a graduate of a training school for nurses, approved by the board, which gives a two years' course in a public or private hospital where medical, surgical and obstetrical cases are received and treated, shall be eligible for such examination upon payment of a fee of ten dollars, upon the filing of the application for examination. Such examination shall include the subjects of elementary anatomy and physiology, medical, surgical and obstetrical nursing, materia medica, dietetics and home sanitation. Male applicants shall be examined in genito-urinary diseases instead of in obstetrics. If such applicant shall pass such examination to the satisfaction of the board, said board shall issue a certificate of registration to such applicant. Any person from another state, which state is approved by the board as maintaining standards for the registration of nurses not lower than those provided in this state, who shall show to the satisfaction of the board that he or she has properly and duly registered for the practice of professional nursing in such other state, shall, upon payment of a fee of five dollars, be entitled to registration in this state and to a certificate of registration without examination.

Practice of Midwifery

Acts of 1923, Chap. 264. Sec. 2. The practice of midwifery is defined as and limited to such assistance or offer of assistance as may be rendered by any person for compensation received, promised or expected to any woman in normal child-

birth, without using any instrument or artificial or forcible or mechanical means and without performing or attempting to perform any version or removing or attempting to remove adherent placenta and without prescribing or using or advising the use of any drug other than a disinfectant.

Practice of Chiropody

Rev. 1918, Sec. 2963 (as amended in 1921, Chap. 141). Sec. 1. No other person than those described in sections 2965 and 2966 of the general statutes, shall engage in the practice of chiropody in this state until he shall have presented to the board of examiners in chiropody satisfactory evidence that he is of good moral character, has had a high school education or its equivalent, and has received a diploma or other certificate of graduation from some reputable school or college of chiropody approved by said board of examiners, and has received from said board of examiners a certificate of qualification.

Practice of Optometry

Acts of 1925. Chap. 94. Section 1. The practice of optometry is defined to be the employment of any means other than drugs for the measurement of the power of vision and the adaptation of lenses for the aid thereof.

Statutes of Connecticut Relating to Practice of the Healing Arts, and 1925 and 1927 Supplements to these Statutes are available to any one requesting them.

Address Connecticut State Department of Health, 8 Washington Street, Hartford.

YOUR CHILD IS WHAT YOU MAKE HIM

CONFIDENCE AND SOCIABILITY

By Winifred W. Arrington, A.B., M.S.S.

Division of Mental Hygiene

This child believes in himself and is happy with others.

This child's **PARENTS** respect his interests.

They permit him experiences which develop initiative and resourcefulness.

They allow him to carry all the responsibilities he can, but never ask too much of him.

They praise him when he does well, and deal patiently with his mistakes.

They help him to discover his abilities and to make right use of them.

They encourage him to form friendships.

They teach him the truth about people and train him to be understanding.

They know the value of recreation, and make sure of it for themselves and for him.

They set the right example by having friends and interests of their own and by taking their part in social gatherings.

They develop in their child self-trust.

Mental Health Requires Self-Trust

Self-trust, in our community life, is an *open sesame* that seldom fails. On it depends, in a sense, one's whole social adjustment.

The shy person, when he can be brought to speak his mind, invariably confesses to unhappiness. Social contacts torture him. He is shut out of numberless experiences which he longs to enjoy, simply because he lacks the confidence to approach them. He may be a brilliant individual, or may possess special gifts, but rarely does he succeed in realizing his full capacity and bringing it to expression. Always he is inhibited. Like a dog on a leash, he is forever pulling away from the force that holds him, straining toward his goals but never reaching them.

The confident person, on the other hand, because he has greater freedom of action, usually is happy. Self-trust is an aggressive, sustaining quality which enables one to plunge into the vicissitudes of living with a firm front against rebuffs. As such, it is one of the surest safeguards against mental illness. Those who lack it are actually predisposed to break down. And what is more natural, after years of frustration and perpetual conflict between desire and attainment? Confidence tends to lead from one success to another, but faint-heartedness and fear bring a train of failures that slowly, though surely, undermine resistance.

But neither self-assurance nor timidity merely happen. They represent habits of response that date from childhood. Parents have much to do with their origin. Frequently it is they who have the deciding vote, if they only knew it, in determining which type of emotional response a child is to have. Parents who keep before themselves the thought that their child is an individual, as well as a son or daughter, do not usually err on the side of destroying his self-trust. Treating him as an individual implies respect for his interests and his efforts at self translation. It demands that he be allowed to make his own experiments. It exacts of the father and mother infinite self-restraint, confines them often to the role of interpreter, and sometimes, to that of mere bystander. It calls for constant example from them, for honest hobbies of their own, for their own friends and social interests, in order that the current of their emotions may be well distributed and in no danger of concentrating heavily upon the child and his ventures.

The one-or-two-child family has fostered parents who are super-supervisors. Their determination to participate in every activity of their children is stultifying to the child's initiative and self-dependence. Let your boy or girl make his own trials. Let him invite mishaps. Only so will he learn to extricate himself and acquire self-trust.

SELECTING FOOD FOR THE FAMILY

By E. C. Nickerson, Nutritionist

The mother of a family has a serious problem before her in selecting food for the family group. She knows their varied reactions and endeavors to please them all though she often selects food quite unsuited to their needs in order to satisfy their individual taste—that is, in order to stand in strong with the family! Note the following too familiar examples:

The man of the family has learned somewhere, from the grandparents probably, that meat only is the source of his "strength" so the mother of this family serves meat three times a day, and neglects the vegetables and fruits. Because he is fond of pie, that becomes the dessert five out of seven times a week.

The fifteen year old boy is discouraged from eating such large quantities of food because the mother is appalled at the amount he can store away and she fears disastrous results—though scientists. have shown that a growing boy often requires more calories than an active man.

The eighteen year old high school girl is allowed to eat "light weight" and tasty foods only—delicate salads, clear soups, pickles and sweet desserts although she is thin and has no reserve energy.

The younger children eat huge quantities of bread and butter, all sorts of sweet crackers and cookies but are allowed to go without milk and green vegetables because they do not like them.

And last but not least the mother is so busy pampering the tastes of the others she has no appetite for food herself.

Right Food For Children and Adults

Food plays such an important part in health that the choice of foods in the daily diet cannot well be left to the idiosyncracies of individual members of the famliy. The young child must acquire a taste for simple "growing" foods and he can be safely guided into this habit by those who understand his needs. The adolescent girls still needs "growing" foods and she must be discouraged in her attempt to neglect these at the expense of strength and body weight just because fashion has decreed a slender figure. Although the adult members are not concerned with "growing" food to add to their stature or their weight—in fact usually the contrary—these same foods are essential to their health and should become a part of a nicely balanced food plan.

There should be a guiding hand in every family—one to select food which is so varied as to kind that it furnishes all the health essentials required of it for each member of the family. Now there is really little difference between the foods for children and foods for adults, for young and old need milk, and green vegetables and cereals, and eggs, and bread stuffs and butter. But they differ largely in character, children needing it in simpler form, with less of the meat, breadstuffs in bread rather than pastry form, and fruits and vegetables more thoroughly cooked and with less of the fibre retained. Perhaps the exception would be that young children should never have in their diet pork and ham, and "hot-dogs" and pickles—while adults should not have these too often.

Appearing on the next page is a table of foods classified as to their health function, and rated according to their richness in proteins, mineral elements, vitamins, calories and laxative qualities. The mother who has the welfare of her family at heart would do well to use such a guide in selecting foods for her daily menu—the finishing touches, the personal appeal as it were, appearing when she has blended these into appetizing dishes best suited for the various ages and occupations of her family.

In the family where such a guide has been in use, children are apt to eat heartily of normal healthful food, and because every need of the body has been thus satisfied, there is little craving for excessive sweets, highly spiced foods, pickles and in between-meal soda concoctions.

The accompanying table is quoted from the Handbook of Nutrition issued by the State Department of Health which is available to those who are interested in learning more about food for health.

ESSENTIAL FOOD GROUPS—Some of Each Needed Daily

FOR GROWTH			FOR ENERGY			FOR BALLAST
PROTEINS	MINERAL SALTS	VITAMINS	PROTEINS	CARBOHYRATES	FATS	(LAXATIVES)
whole milk****	whole milk****	whole milk****	whole milk**	whole milk**	whole milk***	———
cheese****	cheese****	cheese**	cheese**	———	cheese*** o	———
meat****	meat**	meat*	meat**	———	meat** o	———
eggs****	eggs***	eggs***	eggs**	———	eggs**	———
cereals (wh)** cereals (ref)*	cereals (wh)** cereals (ref)*	cereals (wh)**	cereals (wh)*	cereals (wh)**** cereals (ref)****	cereals (wh)*	cereals (wh)**** cereals (ref)**
———	vegetables gr.****	vegetables gr.****	vegetables (gr)*	vegetables (gr)*	———	vegetables gr.****
potatoes*	potatoes**	potatoes***	potatoes*	potatoes***	———	potatoes**
vegetables dr.**	vegetables dr.****	vegetables (dr.)**	vegetables (dr)**	vegetables (dr)****	———	vegetables (dr)***
———	fruits (fr)***	fruits (fr)***	———	fruits (fr.)**	———	fruits (fr)***
———	fruits (dr)***	———	fruits (dr)*	fruits (dr)****	———	fruits (dr)***
nuts***	nuts*	nuts*	nuts**	nuts**	nuts***	nuts*
———	———	butter**	———	———	butter****	———

****rich source
***good source
**fair source

*present
—lacking or traces
Ovaries according to fat content

NEWS NOTES FROM THE FIELD

Physicians Licensed

Bridgeport, Maher, John Matthew, St. Vincent's Hospital.
Hartford, Moyle, Henry Brown, 488 Main Street.
Holt, Kerchival Rogers, Hartford Hospital.
New Haven, Foster, Lewis Chandler, New Haven Hospital.
Paul, John Rodman, 146 Everit Street.
Waterbury, Brecker, Francis Wellington, St. Mary's Hospital.

The following midwives have informed the State Department of Health that they have given up the practice of midwifery:

Bloomfield, Franceska May, Mrs., Cottage Grove Road.
Bridgeport, Sarah Wheale, Mrs., 211 Bronx Avenue.
New Britain, Karoline Dziedzic, 23 McClintock Street.
Amelia P. Rudolph, Mrs., 116 Cherry Street.
New Haven, Rosie Alterisi, 221 Portsea Street.
New London, Mary Borkoska, 440 Williams Street.
Union City, Annie Poskiewich, Mrs., 376 No. Main Street.
Porchester, New York, Cacilie Richter, Mrs., 41 Pearl Street.

Visitor at Laboratory

Dr. William Levin, Director of the Hygenic Laboratory of the State Board of Health of Oregon visited the Laboratory recently. He was especially interested in the testing of clinical thermometers as he is considering the desirability of undertaking that test in Oregon. To date Connecticut has the only State Department of Health testing clinical thermometers or enforcing the provisions of a state clinical thermometer law.

Meetings

A successful three day "health school" was held at Burlington, Vermont, the sixth of the New England Health Institutes. These Institutes are sponsored by the State Departments of Health, United States Public Health Service, New England colleges and other allied health organizations.

Thirty delegates from Connecticut attended the conference September 24-26; ten of these were from the State Department of Health. Connecticut offered to become host next year, so in 1929 the New England Health Institute will be held in Hartford sometime during the month of May.

The fall meeting of the Litchfield County Public Health Association was held at Canaan on October fourth.

At the Regional Conference of the American Red Cross a fair representative of public health nurses and board members of visiting nurse associations were present when this was held at Bridgeport. All those who attended this conference were much interested in the exhibits and the pageant which was most colorful and instructive. This pageant was planned by one of the Bridgeport schools to show the work in nutrition which was being done.

Fair Ground Sanitation

During the month of September, visits were made by an inspector of the Bureau of Sanitary Engineering to all of the larger fairs and as many of the smaller fairs as possible. These visits were made for the purpose of checking up on sanitary conditions to see if the sanitary code regulations pertaining to fair ground sanitation were being complied with. These regulations were enacted in May, 1928, by the Public Health Council and deal mainly with water supply, sewage disposal, and food handling.

The fair officials had been notified previous to these inspections and in many instances, improved toilet and water supply facilities were found. Some toilet facilities are still poor. All persons selling food were advised of necessary sanitary precautions. It is felt that a good beginning has been made and further progress will be made next year.

Health Exhibiting

The State Department of Health has just completed its health exhibit circuit of the county agricultural fairs. During this fair season which began September first ten fairs have been visited, two of these for the first time, two in 1927, and the rest some years previous. Over twenty thousand people have been reached by this popular form of health instruction, a tenth of these, or over two thousand children, have been weighed and measured and many thousand adults.

Lectures

The public health course of fifteen lectures which has in previous years been offered to accredited hospital training schools for nurses is again being given at the Hartford Hospital.

SUMMARY OF BUREAU ACTIVITIES

SEPTEMBER, 1928

	DIAGNOSTIC					
	+	—	?	Unclassified	Specimens	Examinations
Typhoid	12	284	4	....	300	300
Paratyphoid A	....	300	....	....	....	300
Paratyphoid B	3	296	1	....	....	300
Diphtheria	43	760	....	....	407	803
Diphtheria Virulence	7	9	....	....	16	16
Vincent's Angina	4	495	....	....	2	499
Hemolytic Streptococci	10	487	....	....	....	497
Tuberculosis	25	158	....	....	179	183
Syphilis	750	2575	120	....	2380	3445
Gonorrhea	42	115	....	....	157	157
Pneumonia	1	3	....	....	4	4
Malaria	....	1	....	....	2	1
Rabies	....	4	....	....	2	4
Specials	5	61	2	58	5	126
					3354	6635

CHEMICAL AND BACTERIOLOGICAL		
Milk samples	414	821
Water samples	293	420
Sewage samples	896	899
Clinical thermometers	36	36
Totals	5093	8811
Total laboratory procedures		15088

Efforts to Lessen Breakage on Laboratory Specimens

On several occasions during the past month a double mailing container, such as is used for the transportation of laboratory specimens to this Department, was received at the Laboratory with both containers smashed nearly flat and the bottle and contents ruined.

Breakage of laboratory specimens in the mails has been increasing recently. Physicians and health officers who have had trouble are requested to call this to the attention of their local postmasters in an effort to save as much breakage as possible. This Department has taken the matter up with the Hartford Postmaster and Superintendent of Mails. They in turn have notified all railway mail clerks in the state requesting them to use care in the handling of these perishable, fragile specimens.

Avoid mailing specimens on carrier belts in your local post office or placing them in boxes where they will drop any considerable distance. At this time of year avoid mailing specimens in out-of-door mail boxes unless you are sure the specimen will be collected before it becomes chilled or frozen. Hemolysis of such specimens may be caused by chilling.

Vital Statistics

MONTH OF AUGUST

Totals for the First Eight Months of the Year, 1926, 1927, 1928

Year	Births	Birth Rate*	Marriages	Mar. Rate*	Deaths	Death Rate*
1926	20,019	19.2±.1	7,591	7.3±.1	12,751	12.2±.1
1927	19,627	18.5±.1	7,661	7.2±.1	11,390	10.7±.1
1928	18,146	16.8±.1	6,545	6.0±.1	12,207	11.3±.1

*Per 1,000 population, annual basis

The accumulated totals above give a rough index of the experience for the years 1926-1928. The total for births, 1928, is known to be materially incorrect owing to missing reports. Therefore this column should be used with caution if any statement is to be based thereon.

A distinct drop in the marriages is to be noted and this is the more apparent when the rate is referred to. This in a measure will account for the falling birth rate.

The death rate has increased decidedly over 1927, but is distinctly below the rate over the same period for 1926. The year 1927 was a record in Connecticut.

Births

The reported births received in the department numbered 2,291, 259 below the 2,550 reported in 1927. The rate for this year is 17.0 as compared with 19.3 a year ago.

For the towns having populations of 5,000 or over, a comparison of the number of births in such towns for 1928 and 1927 reveals the fact that only one town in this list reports an increase of 10 or more. This town is Torrington with an increase of 15±9, which is hardly to be considered significant.

For the month 82 stillbirth reports were received, to give a total of 2,373 births. The stillbirth rate was 34.5±3.8 per 1,000 total births, on a monthly basis. The corresponding figures for 1927 are 84 stillbirths and 2,634 total births. The stillbirth rate was 31.9±3.5. There is no significant difference between these rates.

With respect to the sex distribution of the stillbirths, 46 were males and 36 females, yielding a sex ratio of 128 males to 100 females.

Deaths

During the month 1,280 death records were received to give a rate of 9.5 per 1,000 of the population. With the exception of last year, when the rate was the astonishingly low mortality

of 8.8 per 1,000, this rate of 9.5 is the lowest to appear in the last six years.

The record for the month is 116 more deaths than a year ago. The year so far is 817 in excess of the mortality of 1927. There seems to be little likelihood that 1928 will equal the record of 1927. But the year may very possibly beat the next lowest rate, that of 11.3 in 1924. Last year the rate was 10.6 per 1,000.

Comparing 1928 and 1927 for certain causes of death, the following table has been prepared to show increase or decrease, as the case may be.

Cause of Death	1928	1927	Increase	Decrease
Typhoid fever	4±2	0	4±2	....
Measles	1±1	2±1	....	1±2
Scarlet fever	0	0	....	....
Whooping cough	12±3	2±1	10±4	....
Diphtheria	4±2	8±3	....	4±3
Influenza	4±2	5±2	....	1±3
Poliomyelitis	2±1	2±1	....	....
Epidemic encephalitis	1±1	2±1	....	1±2
Cerebrospinal meningitis	2±1	2±1	....	....
Pulmonary tuberculosis	69±8	53±7	16±11	....
Tuberculosis, other forms	7±9	12±3	....	5±4
Cancer	151±12	120±11	31±17	....
Diabetes mellitus	23±5	15±4	8±6	....
Diseases of the heart	226±15	194±14	32±20	....
Broncho pneumonia	26±5	29±5	....	3±7
Lobar pneumonia	20±4	31±6	....	11±7
Pneumonia, undefined	1±1	1±1	....	....
Diarrhea and enteritis, under 2	19±4	18±4	1±6	....
Nephritis	79±9	71±8	8±12	....
Puerperal diseases	11±3	13±4	....	2±5
Suicide	13±4	20±4	....	7±6
Accident	110±10	90±9	20±14	....
Other causes	495±22	474±22	21±31	....
Totals	1280±36	1164±34	151	35

It is evident from the above that the summer cycle of typhoid fever is with us this year. Last year it was missing. It will also be noted that whooping cough is present in increased numbers. See the years total below. These are the increases deserving special attention. There is no decrease of moment.

The mortality for certain causes for the first eight months of the years 1928 and 1927 is given in the following table.

Cause of Death	1928	1927	Increase	Decrease
Typhoid fever	15	7	8	....
Measles	55	21	34	....
Scarlet fever	21	15	6	....
Whooping cough	81	29	52	....
Diphtheria	54	60	....	6
Influenza	271	239	32	....
Poliomyelitis	6	3	3	....
Epidemic encephalitis	15	10	5	....
Cerebrospinal meningitis	11	9	2	....

Cause of Death	1928	1927	Increase	Decrease
Pulmonary tuberculosis	671	650	21	....
Other forms, tuberculosis	93	96	....	3
Cancer	1123	1085	38	....
Diabetes mellitus	*	*	....	....
Diseases of the heart	1856	1918	....	62
Broncho pneumonia	580	432	148	....
Lobar pneumonia	649	517	132	....
Pneumonia, undefined	23	14	9	....
Diarrhea and enteritis under 2 ..	69	100	....	31
Nephritis	*	*	....	....
Puerperal diseases	115	114	1	....
Suicide	154	136	14	....
Accident	762	695	67	....
Totals	6620	6150	572	102

*Not available

The list of increases is long. With the exception of diphtheria the so-called diseases of childhood show marked increases. Note whooping cough. Diphtheria is showing a slight decrease. This decrease should be much larger. There is an encouraging decrease in infant diarrhea.

During the month there were 33 deaths caused by automobile accidents. A year ago there were 27.

FOR SIX YEARS—AUGUST, 1928

CONNECTICUT	1923	1924	1925	1926	1927	1928
BIRTHS	2791	2871	2545	2674	2550	2291
Birth Rate	22.7	22.9	19.9	20.6	19.3	17.0
MARRIAGES	1013	1074	984	964	962	847
Marriage Rate	8.2	8.6	7.7	7.4	7.3	6.3
DEATHS	1229	1242	1276	1310	1164	1280
Death Rate	9.9	9.9	10.0	10.1	8.8	9.5
COMMUNICABLE DIS.* DEATHS	137	116	91	107	74	98
Per Cent to Total Deaths	11.1	9.3	7.1	8.2	6.4	7.7
DEATHS UNDER 1 YEAR	189	176	194	173	126	122
Rate Per 1,000 Births	73.6	66.5	78.1	71.9	52.4	51.8

*Includes Typhoid Fever, Measles, Scarlet Fever, Whooping Cough, Diphtheria, Tuberculosis Pulmonary, Cerebrospinal Meningitis, Poliomyelitis, Influenza.

Births, Marriages and Deaths

Statistics

August, 1928

State of Connecticut	Population Est. as of July 1, 1928 Based on U. S. Census	TOTALS				DEATH RATES			Typhoid Fever (1)	Measles (7)	Scarlet Fever (8)
		Births	Stillbirths	Marriages	Deaths	Deaths under 1 year	All Causes (per 1,000 pop.)	Children under 1 year (per 1,000 births)			
	1.613,874	2291	82	847	1280	122	9.5	51.8	4	1	.....
Ansonia	19,805	18	1	9	15	.....	9.1	.....	.....	.....	.....
Branford	7,133	7	.....	5	4	.....	6.7	.....	.....	.....	.....
Bridgeport	179,163	238	9	66	124	7	8.3	26.9	1	.....	.....
Bristol	26,820	52	4	15	13	3	5.8	55.8	.....	.....	.....
Danbury	21,931	32	2	10	13	.....	7.1	.....	.....	.....	.....
Derby	13,194	19	1	6	6	.....	5.5	.....	.....	.....	.....
East Hartford	14,311	22	.....	3	10	1	8.4	90.2	.....	.....	.....
East Haven	5,030	12	.....	5	3	.....	7.2	.....	.....	.....	.....
Enfield	13,445	14	.....	12	12	1	10.7	59.1	.....	.....	.....
Fairfield	16,091	23	.....	1	14	2	10.4	177.4	.....	.....	.....
Glastonbury	6,288	7	.....	1	2	1	3.8	226.4	.....	.....	.....
Greenwich	26,956	33	1	58	25	2	11.1	52.2	.....	.....	.....
Groton	11,607	18	.....	2	11	1	11.4	95.2	.....	.....	.....
Hamden	11,002	21	.....	1	9	2	9.8	183.2	.....	.....	.....
Hartford	172,288	266	10	90	138	18	9.6	51.8	.....	.....	.....
Killingly	9,517	19	.....	10	6	1	7.6	69.0	.....	.....	.....
Manchester	22,478	18	2	12	19	1	10.1	29.5	.....	.....	.....
Meriden	37,085	55	1	17	23	3	7.4	45.6	.....	.....	.....
Middletown	23,000	27	2	14	22	4	11.5	78.4	.....	.....	.....
Milford	15,273	15	1	9	9	.....	7.1	.....	.....	.....	.....
Naugatuck	17,069	20	.....	20	8	1	5.6	116.5	.....	.....	.....
New Britain	72,654	100	4	28	55	8	9.1	61.2	1	.....	.....
New Haven	187,705	268	14	105	129	10	8.2	33.7	.....	.....	.....
New London	30,770	32	3	41	30	3	11.7	48.0	.....	.....	.....
Norwalk	30,537	51	1	18	32	3	12.6	52.2	.....	.....	.....
Norwich	30,762	59	1	24	28	1	10.9	16.6	.....	.....	.....
Plainfield	8,909	14	.....	5	8	1	10.8	95.2	.....	.....	.....
Plainville	5,191	8	.....	2	5	.....	11.6	.....	.....	.....	.....
Plymouth	6,554	6	.....	3	3	.....	5.5	.....	.....	.....	.....
Putnam	9,334	8	3	7	10	1	12.9	60.0	.....	.....	.....
Seymour	8,526	9	.....	3	5	.....	7.0	.....	.....	.....	.....
Shelton	12,000	12	.....	6	8	1	8.0	101.7	.....	.....	.....
Southington	10,123	17	.....	6	6	2	7.1	179.2	.....	.....	.....
Stafford	5,490	7	.....	3	5	.....	10.9	.....	.....	.....	.....
Stamford	49,923	93	6	38	51	9	12.3	88.6	1	1	.....
Stonington	11,152	10	2	7	13	.....	13.1	.....	.....	.....	.....
Stratford	17,451	22	1	3	11	1	7.6	65.6	.....	.....	.....
Thompson	5,252	4	.....	3	4	.....	9.1	.....	.....	.....	.....
Torrington	25,453	47	2	7	11	.....	5.2	.....	.....	.....	.....
Vernon	8,751	19	.....	3	10	.....	13.7	.....	.....	.....	.....
Wallingford	12,747	12	.....	5	4	.....	3.8	.....	.....	.....	.....
Waterbury	107,908	127	6	30	74	11	8.2	64.0	.....	.....	.....
Watertown	7,732	15	.....	4	9	1	14.0	142.8	.....	.....	.....
West Hartford	12,763	23	.....	4	13	3	12.2	238.5	.....	.....	.....
West Haven	19,334	42	.....	13	20	1	12.4	34.2	.....	.....	.....
Westport	5,862	10	.....	1	10	1	20.5	428.6	.....	.....	.....
Wethersfield	5,387	7	1	2	6	1	13.4	342.8	.....	.....	.....
Winchester	9,144	10	1	6	10	1	13.1	71.9	.....	.....	.....
Windham	14,509	1	.....	.....	1	.....	0.8	.....	.....	.....	.....
Windsor	6,880	13	.....	1	8	2	7.0	436.2	.....	.....	.....
Other States		31	.....	.....	31	1	.....	.....	.....	.....	.....
Towns under 5,000	205,585	278	3	103	184	12	10.7	62.4	1	.....	.....

DEATHS FROM IMPORTANT CAUSES

Whooping Cough (9)	Diphtheria (10)	Influenza (11)	Poliomyelitis (22)	Epidemic Encephalitis (23)	Meningitis Cerebrospinal (24)	Tuberculosis-Pulmonary (31)	Tuberculosis-Other Forms (32-37)	Cancer (43-49)	Diabetes Mellitus (57)	Diseases of the Heart (87-90)	Pneumonia-Broncho 100 (1)	Pneumonia-Lobar 101 (1)	Pneumonia-undefined 101 (2)	Diarrhea and Enteritis under 2 (113)	Nephritis (128-129)	Puerperal Diseases (143-149)	Suicide (165-174)	Accident (175-189)
12	4	4	2	1	2	69	7	151	23	226	26	20	1	19	79	11	13	110
.....	.....	.....	.....	.....	.....	2	.....	2	.....	2	.....	.....	.....	.....	.....	.....	.....	2
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
4	.....	.....	.....	.....	.....	5	.....	16	.....	21	3	2	.....	.....	10	3	.....	19
.....	1	.....	.....	.....	.....	.....	.....	2	.....	1	.....	.....	.....	1	3	.....	.....	1
.....	.....	.....	.....	.....	.....	1	.....	2	.....	4	.....	.....	.....	.....	2	.....	.....	1
.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	1	.....	1
1	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	.....	.....	.....	.....	1	.....	1	.....
.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	3	.....	.....	.....	2	.....	.....	.....	.....	1	.....	.....	1
1	1	.....	.....	.....	.....	.....	.....	3	.....	3	.....	.....	.....	.....	1	.....	.....	1
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
1	.....	.....	.....	.....	.....	1	.....	1	2	6	1	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	2
.....	.....	.....	.....	.....	.....	.....	.....	2	.....	1	.....	.....	.....	1	.....	.....	1	.....
2	.....	.....	1	.....	1	11	.....	15	3	26	2	1	.....	6	7	1	4	5
.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....
.....	.....	.....	.....	.....	.....	1	.....	6	1	4	1	.....	.....	.....	.....	.....	.....	1
.....	.....	.....	.....	.....	.....	3	1	.....	.....	7	.....	.....	.....	.....	1	.....	.....	1
.....	.....	.....	.....	.....	.....	2	.....	3	.....	4	.....	.....	.....	.....	1	.....	.....	2
.....	.....	.....	.....	.....	.....	.....	.....	2	1	1	.....	1	.....	.....	1	.....	.....	1
1	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	1	.....	.....	.....	3	1	5	.....	8	2	2	.....	.....	2	1	.....	9
.....	.....	1	.....	.....	1	9	.....	14	2	21	5	5	.....	1	8	2	1	12
.....	.....	.....	.....	.....	.....	3	1	5	.....	7	1	.....	.....	.....	1	.....	1	3
.....	.....	.....	.....	.....	.....	4	.....	2	1	6	1	.....	.....	.....	2	.....	.....	5
.....	.....	.....	.....	.....	.....	2	.....	4	.....	5	1	.....	.....	.....	1	.....	.....	3
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	2	.....	.....	1
.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	1	.....	2	.....	1	.....	.....	3	.....	.....	1
.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	1	.....	.....	.....	3	.....	.....	.....	.....	2	.....	.....	.....
.....	.....	.....	.....	.....	.....	1	.....	1	.....	1	.....	1	.....	1	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	1	.....	.....	.....
.....	.....	.....	.....	1	.....	2	.....	7	1	6	.....	1	.....	1	3	.....	1	.....
.....	.....	.....	.....	.....	.....	.....	.....	2	.....	1	.....	.....	.....	.....	3	.....	1	1
.....	.....	.....	.....	.....	.....	1	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	1
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	2	1	4	.....	.....	.....	.....	1	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	2	.....	1	3
.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1	.....	1	.....	.....	.....	3	.....	13	3	9	5	4	.....	2	1	.....	.....	6
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	1	.....	.....	2
.....	.....	.....	.....	.....	.....	1	1	2	.....	3	.....	.....	.....	1	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	2	.....	1	.....	2	1	.....	.....	.....	2	.....	.....	1
.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	1
.....	.....	.....	.....	.....	.....	.....	.....	2	1	3	2	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....	.....	.....	1	.....	1	.....	2
.....	1	.....	.....	.....	.....	.....	1	2	1	5	1	.....	1	.....	1	.....	.....	.....
1	.....	1	1	.....	.....	6	1	21	6	38	.....	2	.....	4	12	2	1	20

Occupational Diseases

OCCUPATIONAL DISEASES

for the month of September, 1928

ETIOLOGICAL FACTORS

Allergia	
(Vegetable dust)	22
Arsenic	
Dermatitis	2
Bakers	
Dermatitis	1
Hydrogen sulphid	
Conjunctivitis	4
Lead	
Systemic	2
Mercury	
Dermatitis	7
Phenol Derivatives	
Dermatitis	1
Turpentine	
Dermatitis	2
Washing powder (alkali)	
Dermatitis	1
	42

Some Factors in the Prevention of Occupational Diseases

Where the worker is exposed to dust, fumes, or other toxic material, it is necessary to know:

(a) The smallest amount of the toxic material which will affect his health, that is, the minimum or threshold dose.

(b) The physical condition of those employed in hazardous processes.

(c) The methods that may be utilized to keep the amount of toxic material to which the worker is exposed, below the minimum toxic dose.

Much research work is being done on the establishment of the minimum toxic dose for various materials. With this factor known, we may bend our energies to keep the amount of toxic material below the factor by suitable enclosure of processes, adequate dust removal, masks, respirators, etc. This work, in conjunction with physical examinations of those to be employed in hazardous processes and subsequent periodical re-examinations with necessary laboratory examinations of blood and body fluids, will enable us to control the effect of toxic material upon health.

Preventable Diseases

INCIDENCE OF DISEASE FOR MONTH OF SEPTEMBER, 1928

A comparison of the daily morbidity reports received during the month of September, 1928, with the corresponding month for the years 1923, 1924, 1925, 1926 and 1927.

	Average 1923-1927 for Sept.	Mean 1923-1927 for Sept.	1923	1924	1925	1926	1927	1928
Cerebrospinal meningitis ..	4	4	4	6	3	6	3	3
Diphtheria	83	78	115	112	67	42	78	73
Encephalitis epidemic	3	3	3	4	2	4	3	2
Measles	27	27	28	21	31	26	27	44
Poliomyelitis	29	24	24	34	12	11	62	14
Scarlet fever	83	89	91	103	70	89	64	37
Smallpox	....	....	2	....	....	....	....	....
Typhoid fever	36	35	58	38	35	28	22	11
Tuberculosis, pulmonary ..	120	121	121	128	111	126	116	120
Whooping cough	177	171	170	171	256	110	180	130

A comparison of the morbidity of all reportable diseases for the two preceding months, July, 1928 and August, 1928 with the September, 1928 record is as follows:

	July, 1928	Aug. 1928	Sept. 1928
Anthrax	....	1	....
Cerebrospinal meningitis	4	6	3
Chickenpox	54	23	22
Diphtheria	51	47	73
Dysentry amoebic	1	....	....
Dysentry bacillary	....	3	1
Encephalitis epidemic	2	2	2
German measles	15	7	6
Influenza	7	11	17
Malaria	1	1	1
Measles	798	122	44
Mumps	110	39	30
Paratyphoid fever	3	1	2
Pneumonia, broncho	61	46	47
Pneumonia, lobar	39	36	49
Poliomyelitis	5	13	14
Scarlet fever	66	30	37
Septic sore throat	13	6	4
Tetanus	3	1	....
Tuberculosis, pulmonary	138	127	120
Tuberculosis, other forms	14	24	5
Typhoid fever	4	19	11
Undulant fever	1	1	1
Whooping cough	356	266	130
Gonorrhea	143	136	157
Syphilis	143	166	142
Chancroid	....	1	....
Ophthalmia neonatorum	....	....	1

Cases of Certain Reportable Diseases

September, 1928

	Population Est. as of July 1, 1927	Typhoid Fever	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Meningitis Cerebrospinal	Poliomyelitis	Tuberculosis Pulmonary	Tuberculosis Other Forms	Pneumonia Lobar	Pneumonia Broncho-	Other Com. Diseases
State Total	1,613,874	11	44	37	130	73	3	14	120	5	49	47	386
NEW HAVEN CO.	483,603	8	5	6	53	14	2	6	41	4	10	4	112
New Haven	187,705	4		4	26	3	1	2	18	4	3	1	63
Waterbury	107,908	2		1	8	5			4		2	1	12
Meriden (city and town)	37,085	2	2	1	2	1	1		4		1	2	10
Ansonia	19,805		2			1		2	5				5
West Haven	19,335				2	3			2				7
Naugatuck	17,069										1		
Wallingford (town and boro)	12,747								2		1		
Milford	15,273							1	1				
Derby	13,194					1			1				
Hamden	11,002				7						2		8
Branford (town and boro)	7,133				6								1
Seymour	8,526												
Towns under 5,000	21,792		1		2			1	4				6
FAIRFIELD CO.	387,138		24	14	31	22	1	3	26	1	15	16	48
Bridgeport	179,163		2	5	9	12			18	1	2	12	27
Stamford (city and town)	49,923		2	5	8	1	1	1	2		4	1	3
Norwalk	30,537												4
Danbury (city and town)	21,931		12						1		1		3
Greenwich (town and boro)	26,956				14				1		4	1	7
Stratford	17,451		1			4			1		2		
Fairfield	16,091					2			2		2		2
Shelton	12,000			1		1		1					1
Westport	5,862							1					
Towns under 5,000	27,224		7	3		2			1			2	1
HARTFORD CO.	411,342	2	6	16	29	18		3	37		13	22	153
Hartford	172,288	1	2	2	12	6		2	13		4	6	112
New Britain	72,654	1		2	4	2			10		3	4	20
Bristol (city and town)	26,820		2		4	1			3				2
Manchester	22,478			2		1			5				5
Enfield	13,445					5			3			1	3
East Hartford	14,311			3		1						1	4
Southington (town and boro)	10,123								1				1
West Hartford	12,763				3						6	4	5
Windsor	6,880					1						1	
Glastonbury	6,288												
Wethersfield	5,387												
Plainville	5,191												
Towns under 5,000	42,714		2	7	6	1		1	2			5	1
NEW LONDON CO.	116,306	1	5	1	9	7		1	8		4	3	31
Norwich (city and town)	30,762	1				1			4		1	3	10
New London	30,770				1				1		2		12
Stonington (town and boro)	11,152		4	1									
Groton (town and boro)	11,607		1								1		
Towns under 5,000	32,015				8	6		1	3				9
LITCHFIELD CO.	81,518		2		8	4		1	2		3	2	12
Torrington (town and boro)	25,453					3							
Winchester (inc. Winsted)	9,144								1				1
Plymouth	6,554												
Watertown	7,732		2										1
Towns under 5,000	32,635				8	1		1	1		3	2	10
WINDHAM CO.	56,717					7					1		13
Windham (inc. Willimantic)	14,509					1							3
Putnam (city and town)	9,334					1					1		2
Plainfield	8,909												
Killingly (inc. Danielson)	9,517					5							8
Thompson	5,252												
Towns under 5,000	9,196												
MIDDLESEX CO.	49,372		2			1			3		1		14
Middletown (city and town)	23,000								2				9
Middletown State Hospital													
Towns under 5,000	9,196		2			1			1		1		5
TOLLAND CO.	27,878								3		2		3
Vernon (inc. Rockville)	8,751										1		
Stafford (town and boro)	5,490								1				
Towns under 5,000	13,637								2		1		3

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Connecticut Health Bulletin

"For a Clean State and a Healthy People"

Vol. 42 **November, 1928** **No. 11**

SPECIAL ARTICLES

Reallocation of Non-Resident Deaths

Preventive Mouth Hygiene

Hazards in Chromium Plating

September and October Vital Statistics

STANLEY H. OSBORN, M. D., C. P. H., Commissioner

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MONTHLY HEALTH BULLETIN

Vol. 42 November, 1928 No. 11

REALLOCATION OF NON-RESIDENT DEATHS*

By William C. Welling

No paper on the Reallocation of Deaths by residence could be presented to this section without reference to the paper read by Dr. Otto R. Eichel on December 10, 1918 and in this city of Chicago.

So thoroughly had Dr. Eichel analyzed this problem in the State of New York that to adopt his formulated rules, with but few exceptions, made the problem relatively simple in a state the size of Connecticut, where the population was 1,586,435 by the 1927 estimate. The population of New York State for the same year was 11,466,169.

It will be clearly evident in the course of this paper just how great Dr. Eichel's influence was in determining the course of procedure in Connecticut, and with this salutation to the pioneer work which that distinguished vital statistician did, a brief review of allocation in Connecticut for 1927 will be presented. His lamentable and untimely death came as a shock to all.

Dr. Eichel began his paper this way: "The subject of so-called non-resident deaths has occupied the attention at some time or other of nearly every one responsible for official vital statistics." And who of us in this section—at least those of us who are vital statisticans will not say amen to this?

Non-Resident Deaths affect Rates

In Connecticut it was known for some time that the infant mortality rates were incorrect. The larger towns, hospital centres, received credit for the birth but in many instances the infant later died in the town where the parents resided, they having come to the larger town for the birth. No effort was made to correct this situation.

The same is true of all deaths, with the difference that a half hearted statistical gesture was made to recognize non-resident deaths. It was not a correction and it could hardly be called an adjustment. The statistical tables of towns, showing all the deaths quite irrespective of cause, merely contained a footnote: "Deaths of non-residents in public institutions"—so many for towns having such deaths, and then the statement "Corrected rate," followed by the resultant figures.

*Paper read at Vital Statistics Section of American Public Health Association at Chicago, October 18, 1928.

In other words, the non-resident deaths were merely dropped out. There was no attempt at reallocation. Fortunately, as far as is known, no one ever paid any attention to these footnotes. Certainly they are never used in office research.

Allocation Started in Connecticut in 1927

What has been said heretofore, of course, applies to the years previous to 1927. During the year 1926 the problem of reallocation of deaths was considered. A test was made for several months, comparisons before and after, and what office clerical problems would arise. It was decided that it could be done and at the meeting of the State Department of Health on November 12, 1926, it was voted that it would be done during 1927 and thereafter.

On the first of January, 1927, the following notice was sent to Registrars:

"After due consideration of the advisability and feasibility of the adjustment of deaths for residence at the time of death, by vote of the State Department of Health, passed at its meeting of November 12, 1926, it was decided to start the allocation of deaths according to residence, this measure effective for all deaths in 1927 and thereafter.

It is the opinion of the Council that the selected exclusion of certain non-resident deaths will give a better index of the true sanitary conditions of the city or town affected.

Obviously such exclusions must be based on definite rules and regulations of procedure. These are enclosed herewith and will be again outlined in the Monthly Bulletin of March. As these rules are intended to be used as a working basis they may from time to time be altered or amended or new rules added.

You may receive a form notice (sample pink slip enclosed) that a death is being charged to your jurisdiction, such death having occurred in some other town. If this change is an error, you may reply within two weeks on the back of the notification, giving reasons.

It is important to understand that these changes are solely for statistical analysis in this department. There will be no actual transference of records between cities, towns or boroughs.

And it is equally important that registrars send copies of death, birth and marriage records of non-residents to the registrars of cities and towns where the party or parties concerned are or were residents. This is required by Section 325 of the statutes and applies not only to towns in Connecticut **but to other states as well.**

As the infant mortality rate is based on the number of living births, in allocating infant deaths it will be necessary to

allocate births and this will be done according to the residence of the **mother.**

N.B. If you receive a copy of the death record of a resident of your city or town which occurred in some town **outside** Connecticut you will cooperate with this department if you send a card copy, marking the same, Death of Resident out of state. In this way the department will receive all records not only of those dying within the state but also of those dying out of the state, depending upon the cooperation of those outside states in sending registrars copies of deaths of Connecticut Residents.

Copies of these rules and regulations are being sent to the State Registrars of Massachusetts, Vermont, Maine, New Hampshire, Rhode Island, New York, New Jersey and Pennsylvania.

Explanation of the Terms

"A NON-RESIDENT DEATH is that of a person who dies away from his usual place of abode within one year if the duration of the disease (stated or inferred) was as great or greater than the length of residence in the district where death occurred.

1. Chronic Diseases. In the case of a death from tuberculosis or any nervous disorder, although the length of residence exceeds one year, if the duration of the disease is longer the death shall be considered as non-resident; and if the duration is not given, all deaths from chronic causes shall be considered non-resident if they occur within six months after arrival at place of death.

2. Communicable Diseases. Deaths from communicable diseases, particularly typhoid, tuberculosis, and less common diseases when in epidemic form, shall be charged to the place where the disease was contracted, if definitely known as being elsewhere than the place where death occurred.

3. External Causes. A death due to violence or accidental cause shall be charged to the usual place of abode if known, unless it definitely resulted from a hazard peculiar to the place of occurrence. Deaths caused by drowning, conflagration, street car, automobile or railroad accidents, or industrial accidents in the course of employment, are the type which shall be charged to the place of occurrence. Homicidal and suicidal deaths shall be charged to the place of occurrence.

4. Deaths in State Institutions (Correctional, Educational and Medical). These shall be charged to the place of residence at the time of admission, unless some other district is

stated or may be inferred to have been the district of origin of the fatal illness."

Rules

"(1) Deaths from external causes shall be charged to one of the following places, to be preferred in the order stated:

(a) District of occurrence; if unknown then to
(b) District of death; if unknown then to
(c) District where body was found.

(2) Deaths of inmates of custodial institutions (for the feeble-minded, juvenile delinquents, etc.) shall be treated the same as those occurring in prisons and insane asylums (see application 4 above). Deaths of inmates of orphan asylums and homes for the aged shall be treated as deaths of residents unless transferable under the general definition and its exceptions.

(3) Deaths of new born infants and young children shall be charged to the district of usual residence of the mothers.

(4) If the data upon which judgment must be based, such as residence or duration of disease, are missing or inconsistent, then charge to district of death; but if other data make possible an inference with reasonable certainty as to the district of residence when the cause of death originated, then the death should be charged to that district.

(5) When two or more causes of death are given jointly, the International List of Joint Causes shall be used as a guide to preference of cause for allocation of the death.

(6) If the district in which the cause of death originated is stated, the death shall be charged to such district unless this statement is inconsistent with other data on the certificate, then the procedure in rule (4) above shall be followed.

(7) All puerperal deaths except puerperal septicemia will be charged to place of usual abode.

(8) Births will be allocated by residence of mother."

In the reading of these rules a few exceptions to Dr. Eichel's general principals will be noted. In the first place, suicidal deaths are to remain where they occur. Dr. Eichel's rule was to place them where they resided. The feeling in Connecticut is that they should remain where they occurred. This is perhaps a debatable point, but if a city has special suicidal facilities, why should it not be reflected in the statistics?

It will be noted that puerperal septicemia deaths remain where they occur. It seemed advisable to make this rule, es-

pecially since the hospitalization of pregnant women has increased so much. If a city is running high in this cause certainly it should suffer statistically rather than the city or town of residence.

Deaths of new born infants and young children are charged to the residence of the mother. Births are allocated by residence of mother. This adjusts the infant mortality. The allocation by residence of mother and not the father was to allow for births occurring out of wedlock.

Equipped with these rules the year 1927 was anticipated with interest. The pink slips advising registrars of the charging of deaths to their jurisdictions were sent out. So far none has been returned in objection to the charge. Those which have been returned—and they were many—merely bore an O.K.

Office Procedure

The office procedure is perhaps worthy of outline. The Connecticut records lend themselves admirably to allocation. The records received in the office are card copies of the originals. These cards are 4 x 6 inches. When a record is transferred to another town, a tracer card is left, bearing at the top the name of the town, followed by D or B for Death or Birth. This is necessary if the card should get out of file, and identifies it. The name of the individual to whom the record applies is then written on the next line, with the words, transferred to such and such a town. Then below is the month and year. The tracer card is then complete. There is no reason why this card should ever get out of file. However, many things happen for no apparent reason. And if the tracer should get out of file it is immediately apparent where it belongs.

The death record which has been transferred has a distinctive clip attached to it. This is to show that a pink slip must be written to the registrar. When that has been done the clip is removed. If no reply is received from the registrar, the record stays where it has been transferred, the cards move on to the punch card operators and the record is incorporated in the statistics.

A similar tracer card is made for birth records. No report is sent to registrars. It need hardly be said that a tracer card is necessary in case certified copies of records are desired or for some other reason the record must be inspected. Without such a tracer all the records for the month would have to be searched.

It will be seen that the system and procedure is relatively simple. The receipt of late records does cause some inconvenience.

Interpreting the Year's Results

Some of the results of the year will now be given. These must of necessity be somewhat abbreviated as the registration figures are still in the process of tabulation. However, some of the high lights are available.

The towns selected have been chosen not at random. The largest cities have been tabulated. Middletown, a city of 22,932 inhabitants is the seat of a state hospital for the insane. Preston, a small town of 3,465 population is also a town where there is a large hospital for the insane. Newington has a sanatorium for tuberculosis and is a small town of 2,984 population. Ansonia and Derby are two towns very close together. In Derby there is a hospital—in Ansonia there is none.

1927—Deaths	Allocated	Unallocated	Allocated Rate	Unallocated Rate	Rate* 1926
Hartford (168,258)	1706	2073	10.1	12.3	13.0
New Haven (184,727)	1819	2070	9.8	11.2	12.1
Bridgeport (174,890)	1414	1514	8.1	8.7	9.9
Middletown (22,932)	224	459	9.8	20.0	23.1
Preston (3,465)	25	260	7.2	75.0	74.1
Newington (2,984)	30	98	10.1	32.8	39.0
Ansonia (19,548)	199	129	10.2	6.6	8.9
Derby (12,963)	105	180	8.1	13.9	13.8
New Britain (71,068)	618	574	8.7	8.1	9.2
Torrington (25,316)	219	211	8.7	8.3	9.6
Manchester (21,992)	187	171	8.5	7.8	7.7
State (1,586,435)	16,451	16,758	10.4	10.6	11.8

*Unallocated

It was confidently expected that the rates for the larger cities would be reduced and in the main this has been true. The exception above seems to be New Britain. Evidently the hospital in this city serves the city alone and patients going to hospitals from outlying districts prefer to go elsewhere.

Astonishing reductions in rate will be noted for Middletown and of course the rate, unallocated, for Preston, 75.0 per 1,000, would have received no consideration had it been sent out unless it had resulted from catastrophe.

The infant mortality for 1927 and 1926 is given for a few towns and cities.

City or Town	Infant Mortality, per 1,000 living births 1926	1927
Hartford	72.8	72.6
New Haven	54.2	55.3
Bridgeport	72.9	40.2
Middletown	60.6	59.8
Ansonia	113.5	47.8
Derby	75.2	56.3

These figures are of interest. It will be noted that the larger cities, Bridgeport excepted, did not experience such a marked reduction in infant mortality as might have been expected. Evi-

dently the transference of births and infant deaths has been such as not materially to affect the rates in the larger cities. If this is so, it might be expected that possibly the smaller cities may have suffered. Deaths which before allocation were not charged back to a town are now so referred.

And this is indeed what has happened. Many of the smaller towns have higher rates in 1927 than in 1926. This was inevitable but nevertheless came as a shock to some public health nursing organizations making special effort to reduce infant mortality. However, the allocated figures for 1927 are not safely comparable to any figures in the past. When perspective of a few years has been experienced much of the immediate distortion will disappear.

A table for a few causes of deaths, comparing 1926 and 1927 is added.

		Typhoid Fever	Scarlet Fever	Diphtheria	Pulmonary Tuberculosis	Broncho Pneumonia	Lobar Pneumonia	Influenza	Cancer all forms
Hartford	1926	5	2	11	67	106	109	30	231
	1927	4	—	7	103	72	75	19	156
New Haven	1926	4	5	5	62	103	145	57	215
	1927	—	2	3	99	85	91	45	211
Bridgeport	1926	1	6	11	74	71	97	74	158
	1927	1	—	26	95	59	62	27	138
New Britain	1926	3	—	1	32	32	33	24	56
	1927	1	—	2	47	36	29	10	67
Torrington	1926	2	—	2	11	11	11	19	23
	1927	1	—	2	14	10	9	1	18
Middletown	1926	—	—	6	25	41	39	10	30
	1927	—	1	—	16	8	11	2	28
Manchester	1926	—	—	1	6	7	11	2	23
	1927	—	—	5	7	3	7	2	27

The hospitalization of tuberculosis cases in towns other than residence of deceased is immediately evident. And to an extent this is also true of cancer. In Connecticut, the year 1927 was a record year, relatively free from the pneumonias and influenza. Therefore without doubt these columns exaggerate the effect of allocation.

Health officers throughout the state have welcomed the system, and on numerous occasions have notified the office of residence other than that contained in the death certificate.

PREVENTIVE MOUTH HYGIENE

By A. Elizabeth Ingraham

Whenever the doctors and nurses at the well child conferences call the attention of the mothers to the condition of their children's teeth these questions are almost invariably asked. "Are these baby teeth worth worrying about?" "Will not good new ones come in after these fall out?"

The time between the eruption of the last deciduous tooth and the appearance of the six year molars, has in times past been a neglected period in the life of a child, as far as mouth hygiene is concerned. The old idea prevalent in the past, and still existent to a certain extent, that the care of the baby teeth was not important, and that all would eventually be well with the child because the permanent set would come later, is now thrown into the discard.

Workers in the field of public health who have turned their attention to the problem of mouth hygiene, have for some time agreed that the logical starting point of this work is with the pre-school child—the child from two to six years of age. or from the time it has its full set of temporary teeth until the eruption of the six year molars.

Recognizing these facts the Connecticut State Department of Health through its Bureau of Child Hygiene has for the last six months been confining its work in mouth hygiene to pre-school children. The well child conferences, more than fifty of which are held regularly throughout the state, are being used as a working base. Here the dental hygienist meets children of all classes brought by their mothers for physical and dental inspection and examination. To these conferences the hygienist takes her equipment, which consists of a portable dentist's chair, an instrument sterilizer, instruments, etc., also a delineascope, a daylight screen and lantern slides.

The program followed is education, the starting point being with the mothers. Using either a blackboard and crayons for outline drawings or the daylight screen upon which pictures can be thrown for illustration, the hygienist gives a talk stressing the following points. She calls the attention of the mothers to the kinds of food they should eat before the arrival of the expected baby; she tells them that the health and vitality of the baby teeth are determined during this pre-natal period, and that since the germs of the permanent ones are in the baby's jaws before birth, if the second teeth are to be sound and normal, the nutrition of the mother must be carefully looked after. In general, simple foods rich in minerals and vitamins should be the bulwark of her diet, as milk, eggs, fresh vegetables and fruits, dark breads and whole grained cereals.

After the close of this talk to the mothers the hygienist exam-

ines the teeth of children in attendance at the conference, taking those from two to six years of age. She shows the mother all defects found that need the service of a dentist. The importance of the care of pits and fissures when they begin to show in the teeth, is stressed. It is further explained that these little black lines do not necessarily mean decay, but if neglected, this is where the enamel is most liable to break through and prove a starting point of future decay that may extend to the inside of the tooth.

Here, too, comes her opportunity to discuss the various phases of correct care of children's teeth, beginning with brushing after each meal, eating tooth-building foods, eating certain hard foods, as bread crusts, to stimulate circulation about the roots; teaching the child to take time to eat slowly and chew his food thoroughly; in short, bringing home the facts to parents that if they wish their children to have strong perfect teeth in adult life they must start this preventive care to build healthy teeth from the very beginning.

Before the child leaves the dental chair the teeth are cleaned if the mother wishes it,—and she always does. The thing worthy of note is that the children themselves are keen to have the work done. The question in each child's mind seems not to be "Do I want my teeth cleaned," but "How soon will my time come?" The hygienist never uses a dental engine in her work, for fear its whirring noise will make the little ones timid. Instead she takes a little longer time with each child. She is an adept story teller and keeps the child's attention riveted, from start to finish, on some childish ditty, told with many "Oh's" and "Did you know's?" Before sliding out of the chair the little patient has a chance to look at his teeth in a hand mirror and is told how important it is from now on to keep them clean; whereupon he shows his pride in his clean and shiny teeth by showing them to every one who will take the time to look.

After the cleaning is finished, or in some cases while it is being done, the waiting mother is shown the need of taking the child to a dentist at least twice a year that its teeth may have regular care. She is urged not to forget that it is just as necessary to keep the first set of teeth in perfect condition as the permanent set; that if these first teeth are neglected to the point of becoming so troublesome that extraction is necessary, their loss may make the dental arch narrow and as a result, the second teeth may not have room to come in straight and consequently may be crowded out of line.

In the Bureau report submitted three months ago there were eleven oral hygiene clinics being regularly held. At the date of this writing there are twenty-four such clinics. Four hundred and eight children have been examined by the hygienist, one hundred and eighteen prophylactic treatments have been given and two hundred and forty-one children have been sent to the family dentists for correction of dental defects.

Laboratories

SUMMARY OF BUREAU ACTIVITIES

OCTOBER, 1928

	DIAGNOSTIC					
	+	—	?	Unclassified	Specimens	Examinations
Typhoid	11	275	....	....	288	286
Paratyphoid A	....	286	....	....	....	286
Paratyphoid B	1	284	1	....	....	286
Diphtheria	50	861	....	....	467	911
Diphtheria Virulence	11	55	....	....	64	66
Vincent's Angina	13	527	....	....	12	540
Hemolytic Streptococci	14	514	....	....	....	528
Tuberculosis	18	179	....	....	197	197
Syphilis	905	3207	106	....	2878	4218
Gonorrhea	50	127	....	....	177	177
Pneumonia	2	....	....	....	2	2
Malaria	....	1	....	....	1	1
Rabies	1	1	....	....	2	2
Specials	2	65	....	77	26	144
					4114	7644

CHEMICAL AND BACTERIOLOGICAL		
Milk samples	415	793
Water samples	346	526
Sewage samples	684	684
Trade waste samples	4	7
Seafood samples	3	3
Clinical thermometers	739	739
Totals	6305	10396
Total laboratory procedures		21162

October Was A Busy Month

This is the first October in the history of the Laboratories when more than 10,000 examinations were made. The figure of 10,396 examinations for October, 1928, may be compared with 7,110 for the corresponding month in 1927; 6.644 in 1926; 2,002 in 1918 and 340 in 1908.

A large portion of the increase this month over the corresponding month of last year is in the number of examinations of blood for syphilis, diagnostic disease specimens other than diphtheria, milk samples, water samples, sewages and clinical thermometers. Less cultures for diphtheria were received than during any October for the past four years but practically all other types of specimens showed an increase.

Vital Statistics

MONTH OF SEPTEMBER

Totals for the First Nine Months of the Year, 1928, 1927, 1926

Year	Births	Birth Rate*	Marriages	Mar. Rate*	Deaths	Death Rate*
1926	22,406	19.1±.1	9,063	7.7±.1	14,004	11.9±.1
1927	22,045	18.5±.1	9,062	7.6±.1	12,662	10.6±.1
1928	20,234	16.7±.1	7,905	6.5±.1	13,448	11.0±.1

*Per 1,000 population, annual basis

The birth rate continues to drop, reaching a rate of 16.7 for the first nine months of this year. This is one tenth of a point below the record for the first eight months. The accumulated birth rate, given above, is not, however, as low as the rate for the month alone. This rate is 15.5.

A decided drop in the marriage rate is to be noted. It is of interest to note how close the marriages for 1926 and 1927 approach equality. The record for 1928 shows a great departure.

The deaths are up, when 1928 is compared with 1927, yet the rate of 11.0 is a low rate. Last year, the record year for the State, the rate for the year ended at 10.6. This is the same as the rate for the first nine months. In 1926 the rate at the end of the year was 11.8. Using these rates therefore as indices for the rate for the whole year it might be guessed that the rate for 1928 would be 11.0 or 10.9.

Births

The total number of births for the month were 2,086, 332 less than 2,418 reported in 1927. This number gives the very low rate of 15.5 per 1,000 of the population. This is a continuance of the downward trend which has been noted in these articles for several years.

Of the towns having 5,000 or more population, 18 reported more births in 1928 than in 1927. But in only four was the increase 10 or more. These towns are:

Stamford	12±14	Waterbury	28±16
Stonington	12±4	West Haven	11±8

Of these, Stonington is the most significant. The increase for Waterbury is on the threshold of significance.

Records of 67 stillbirths were reported, to give a total number of births of 2,153. From this it may be readily calculated that the stilibirths appeared at a rate of 31.1±4.0 per 1,000 total births. Last year the rate was 31.6±3.5, there being 79 stillbirths among 2,497 total births. There is, of course, no marked difference in the two rates.

The sex distribution of the stillbirths is of particular interest. There were 45 females to 22 males. This gives a sex ratio of 204 females to 100 males, and is very unusual. In general the sex ratio runs in favor of the males.

Deaths

The deaths were somewhat fewer this year than last year, there being a decrease of 31. The exact figures are: 1928, 1,241 deaths, 1927, 1,272. The rate of 9.2 is the lowest September rate to appear in the past six years.

A comparison of 1928 with 1927 for a selected list of causes of deaths will give the following tabulation:

Cause of Death	1928	1927	Increase	Decrease
Typhoid fever	0	4±2	....	4±2
Measles	1±1	0	1±1	....
Scarlet fever	0	1±1	—	1±1
Whooping cough	5±2	1±1	4±2	....
Diphtheria	7±3	3±2	4±3	....
Influenza	8±3	11±3	....	3±4
Poliomyelitis	3±2	6±2	....	3±3
Epidemic encephalitis	1±1	2±1	....	1±2
Cerebrospinal meningitis	1±1	0	1±1	....
Tuberculosis, pulmonary	69±8	64±8	5±12	....
Tuberculosis, other forms	5±2	10±3	....	5±4
Cancer	137±12	147±12	....	10±17
Diabetes mellitus	21±5	18±4	3±6	....
Diseases of the heart	207±14	225±15	....	18±21
Broncho pneumonia	37±6	28±5	9±8	....
Lobar pneumonia	25±5	26±5	....	1±7
Pneumonia undefined	0	2±1	....	2±1
Diarrhea and enteritis under 2	16±4	15±4	1±6	....
Nephritis	84±9	92±10	....	8±13
Puerperal diseases	7±3	10±3	....	3±4
Suicide	18±4	20±4	....	2±6
Accident	108±10	95±10	13±14	....
Other causes	481±22	492±22	....	11±31
Totals	1241±35	1272±36	41	72

Of the increases, there is none which may be regarded as of significance. And it is doubtful if there is any decrease which may be noted in particular. Typhoid fever would apparently be worthy of attention, but the numbers are small. In August of this year there were 4 deaths from typhoid fever and none in 1927. Just the reverse of this happened in September.

The table which is now presented shows the total mortality for the year to date for a similar list of causes of death.

Cause of Death	1928	1927	Increase	Decrease
Typhoid fever	10	11	....	1
Measles	56	21	35	....
Scarlet fever	21	16	5	....
Whooping cough	86	30	56	....
Diphtheria	61	63	....	2

Cause of Death	1928	1927	Increase	Decrease
Influenza	279	250	29	....
Poliomyelitis	9	9	....	....
Epidemic encephalitis	16	12	4	....
Cerebrospinal meningitis	12	9	3	....
Pulmonary tuberculosis	740	714	26	....
Other forms, tuberculosis	98	106	....	8
Cancer	1260	1231	29	....
Diabetes mellitus	*	*		
Diseases of the heart	2063	2146	....	83
Broncho pneumonia	617	460	157	....
Lobar pneumonia	674	543	131	....
Pneumonia, undefined	23	16	7	....
Diarrhea and enteritis under 2 ..	85	115	....	30
Nephritis	*	*		
Puerperal diseases	122	124	....	2
Suicide	168	156	12	....
Accident	870	790	80	....
Totals	7270	6822	574	126

*Not available

The so-called diseases of childhood are reaping their toll, showing definite increases over last year. A decrease of 2 is to be noted for diphtheria. It is still 50 or 60 more than it should be. There is more influenza and pneumonia in 1928. It is of more than passing interest to note that the pneumonias, when defined, are keeping in pace comparably. The deaths from accidents are in large increase. The decreases for diseases of the heart and for diarrhea under 2 are encouraging.

As much emphasis is being placed on deaths from automobile accidents, in September there were 42 such deaths; 39 a year ago.

FOR SIX YEARS—SEPTEMBER, 1928

CONNECTICUT	1923	1924	1925	1926	1927	1928
BIRTHS	2618	2581	2375	2387	2418	2086
Birth Rate	21.3	20.6	18.6	18.4	18.3	15.5
MARRIAGES	1555	1352	1383	1472	1401	1360
Marriage Rate	12.6	10.8	10.8	11.3	10.6	10.1
DEATHS	1220	1223	1289	1253	1272	1241
Death Rate	9.9	9.8	10.1	9.6	9.6	9.2
COMMUNICABLE DIS.* DEATHS	114	115	115	74	91	94
Per Cent to Total Deaths	9.3	9.4	8.9	5.9	7.2	7.6
DEATHS UNDER 1 YEAR	195	177	176	177	136	99
Per Cent to Total Births	75.9	66.8	70.9	73.6	56.6	42.3

*Includes Typhoid Fever, Measles, Scarlet Fever, Whooping Cough, Diphtheria, Tuberculosis Pulmonary, Cerebrospinal Meningitis, Poliomyelitis, Influenza.

Statistics

September, 1928

	Population Est. as of July 1, 1928 Based on U. S. Census	TOTALS				DEATH RATES			Typhoid Fever (1)	Measles (7)	Scarlet Fever (8)
		Births	Stillbirths	Marriages	Deaths	Deaths under 1 year	All Causes (per 1,000 pop.)	Children under 1 year (per 1,000 births)			
State of Connecticut	1,613,874	2086	67	1360	1241	99	9.2	42.3	.....	1	.....
Ansonia	19,805	19	.....	12	16	1	9.7	52.4	.....	.....	.....
Branford	7,133	10	.....	6	2	.....	3.3	.....	.....	.....	.....
Bridgeport	179,163	195	13	135	106	11	7.1	42.2	.....	1	.....
Bristol	26,820	42	.....	20	23	3	10.3	55.8	.....	.....	.....
Danbury	21,931	33	1	24	31	4	17.0	83.2	.....	.....	.....
Derby	13,194	13	2	15	7	1	6.4	28.3	.....	.....	.....
East Hartford	14,311	26	1	22	13	1	10.9	90.2	.....	.....	.....
East Haven	5,030	18	.....	4	4	1	9.5	137.2	.....	.....	.....
Enfield	13,445	12	1	14	8	.....	7.1	.....	.....	.....	.....
Fairfield	16,091	20	.....	8	14	2	10.4	176.4	.....	.....	.....
Glastonbury	6,288	3	.....	2	7	.....	13.4	.....	.....	.....	.....
Greenwich	26,956	42	1	66	22	.....	9.8	.....	.....	.....	.....
Groton	11,607	12	.....	12	9	.....	9.3	.....	.....	.....	.....
Hamden	11,002	27	.....	10	6	1	6.5	91.6	.....	.....	.....
Hartford	172,288	254	7	150	124	12	8.6	34.6	.....	.....	.....
Killingly	9,517	13	.....	13	8	.....	100.8	.....	.....	.....	.....
Manchester	22,478	31	3	13	18	1	22.7	29.5	.....	.....	.....
Meriden	37,085	44	1	31	28	.....	9.1	.....	.....	.....	.....
Middletown	23,000	1	.....	.....	24	1	12.5	19.6	.....	.....	.....
Milford	15,273	13	1	7	12	.....	9.4	.....	.....	.....	.....
Naugatuck	17,069	13	1	29	7	.....	4.9	.....	.....	.....	.....
New Britain	72,654	114	2	66	45	6	7.4	45.9	.....	.....	.....
New Haven	187,705	244	10	194	123	12	7.9	40.4	.....	.....	.....
New London	30,770	36	3	36	34	2	13.2	32.0	.....	.....	.....
Norwalk	30,537	2	.....	.....	30	1	11.8	17.4	.....	.....	.....
Norwich	30,762	49	1	30	28	.....	10.9	.....	.....	.....	.....
Plainfield	8,909	14	.....	13	8	.....	10.8	.....	.....	.....	.....
Plainville	5,191	4	.....	4	1	.....	2.3	.....	.....	.....	.....
Plymouth	6,554	9	2	4	3	.....	5.5	.....	.....	.....	.....
Putnam	9,334	11	.....	9	10	.....	12.9	.....	.....	.....	.....
Seymour	8,526	5	.....	3	7	.....	9.9	.....	.....	.....	.....
Shelton	12,000	17	.....	8	9	2	9.0	203.4	.....	.....	.....
Southington	10,123	14	.....	6	4	.....	4.7	.....	.....	.....	.....
Stafford	5,490	6	.....	6	3	.....	6.6	.....	.....	.....	.....
Stamford	49,923	101	2	55	50	4	12.0	39.4	.....	.....	.....
Stonington	11,152	16	.....	8	8	.....	8.6	.....	.....	.....	.....
Stratford	17,451	27	.....	10	7	.....	4.8	.....	.....	.....	.....
Thompson	5,252	8	.....	6	5	.....	11.4	.....	.....	.....	.....
Torrington	25,453	36	2	8	19	1	9.0	25.9	.....	.....	.....
Vernon	8,751	5	1	.....	7	.....	9.6	.....	.....	.....	.....
Wallingford	12,747	20	.....	9	15	.....	14.1	.....	.....	.....	.....
Waterbury	107,908	139	3	78	75	17	8.3	98.9	.....	.....	.....
Watertown	7,732	15	.....	3	4	.....	6.2	.....	.....	.....	.....
West Hartford	12,763	26	.....	8	14	4	13.2	318.0	.....	.....	.....
West Haven	19,334	41	.....	20	14	1	8.7	34.2	.....	.....	.....
Westport	5,862	8	.....	10	1	.....	2.0	.....	.....	.....	.....
Wethersfield	5,387	4	.....	3	4	.....	8.9	.....	.....	.....	.....
Winchester	9,144	13	2	7	7	1	9.2	71.9	.....	.....	.....
Windham	14,509	18	1	21	16	1	13.2	41.4	.....	.....	.....
Windsor	6,880	9	.....	5	6	.....	10.5	.....	.....	.....	.....
Other States		25	.....	.....	20	.....	.....	.....	.....	.....	.....
Towns under 5,000	205,585	209	6	137	175	8	10.2	41.6	.....	.....	.....

DEATHS FROM IMPORTANT CAUSES

Whooping Cough (9)	Diphtheria (10)	Influenza (11)	Poliomyelitis (22)	Epidemic Encephalitis (23)	Meningitis Cerebrospinal (24)	Tuberculosis-Pulmonary (31)	Tuberculosis-Other Forms (32-37)	Cancer (43-49)	Diabetes Mellitus (57)	Diseases of the Heart (87-90)	Pneumonia-Broncho 100 (1)	Pneumonia-Lobar 101 (1)	Pneumonia-undefined 101 (2)	Diarrhea and Enteritis under 2 (113)	Nephritis (128-129)	Puerperal Diseases (143-149)	Suicide (165-174)	Accident (175-189)
5	7	8	3	1	1	69	5	137	21	207	37	25	.....	16	84	7	18	108
.....	1	.....	.....	.....	.....	2	.....	.....	.....	2	1	.....	.....	.....	1	.....	2	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1
2	1	3	.....	.....	.....	4	.....	10	2	16	5	.....	.....	1	7	.....	1	9
.....	.....	1	.....	.....	.....	3	.....	2	.....	2	.....	.....	.....	1	1	.....	1	2
.....	.....	.....	.....	.....	.....	.....	.....	6	2	4	1	.....	.....	.....	1	1	.....	5
.....	.....	.....	.....	.....	.....	.....	.....	1	1	2	.....	.....	.....	1	.....	.....	.....	1
.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....	.....	.....	.....	.....	2	.....	.....	1
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	1	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	1	.....	2	.....	1	.....	.....	.....	.....	.....	.....	.....	1
.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	1	.....	1	.....	.....	1	2
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	1	.....	.....	.....	.....	.....	1
.....	.....	.....	.....	.....	.....	1	.....	1	1	6	.....	1	.....	.....	3	.....	.....	4
.....	.....	.....	.....	.....	.....	.....	.....	3	.....	3	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
.....	3	.....	.....	1	.....	11	.....	11	2	25	2	1	.....	3	5	2	4	11
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	2	.....	.....	.....
.....	.....	.....	.....	.....	.....	1	.....	3	.....	1	.....	.....	.....	1	1	.....	.....	3
.....	.....	.....	.....	.....	.....	1	2	4	1	7	1	.....	.....	.....	2	.....	.....	1
.....	.....	.....	.....	.....	.....	1	.....	5	.....	1	1	.....	.....	.....	1	.....	.....	4
.....	.....	.....	.....	.....	.....	1	.....	3	.....	.....	.....	.....	.....	.....	1	.....	.....	3
.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1	.....	.....	2	.....	1	.....
1	.....	1	.....	.....	.....	4	.....	3	.....	6	1	3	.....	2	4	.....	.....	2
1	.....	.....	.....	.....	.....	9	.....	12	1	20	7	2	.....	2	6	2	2	7
.....	.....	.....	.....	.....	.....	1	1	2	.....	13	.....	2	.....	.....	2	.....	.....	2
.....	.....	.....	.....	.....	.....	1	.....	3	.....	9	.....	.....	.....	.....	3	.....	.....	3
.....	.....	1	.....	.....	.....	2	1	4	.....	4	.....	1	.....	.....	3	.....	.....	2
.....	.....	.....	.....	.....	.....	.....	.....	3	1	2	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	.....	.....	.....	.....	2	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	1	.....	2	.....	.....	.....	.....	2	.....	.....	.....
.....	1	.....	.....	.....	.....	1	.....	1	.....	1	1	.....	.....	.....	.....	.....	.....	1
.....	.....	.....	.....	.....	.....	.....	.....	1	.....	2	.....	.....	.....	.....	.....	.....	1	.....
.....	.....	.....	.....	.....	.....	.....	.....	2	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	1	.....	.....	1	.....	.....	2	1	9	.....	2	.....	.....	6	.....	.....	4
.....	.....	.....	.....	.....	.....	3	.....	1	.....	1	.....	.....	.....	.....	1	.....	1	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1	.....	.....	2
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	3
.....	.....	.....	.....	.....	.....	2	.....	1	.....	4	.....	.....	.....	.....	2	.....	.....	3
.....	.....	.....	.....	.....	.....	1	.....	1	.....	1	.....	1	.....	.....	2	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	3	.....	2	1	1	.....	.....	.....	.....	1	.....
.....	.....	.....	.....	.....	.....	2	1	5	1	12	1	1	.....	1	3	2	2	8
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	2	2	.....	1	1	.....	.....	.....
.....	.....	.....	.....	.....	.....	1	.....	4	.....	1	.....	.....	.....	.....	2	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	2	.....	.....	.....	1	.....	.....	.....
.....	.....	.....	.....	.....	.....	2	.....	2	1	1	.....	.....	.....	1	2	.....	.....	1
1	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	3
.....	.....	.....	1	.....	.....	1	.....	.....	2	4	1	3	.....	.....	.....	.....	.....	1
.....	1	1	.....	.....	.....	12	.....	27	4	23	7	2	.....	1	11	.....	1	16

Occupational Diseases

OCCUPATIONAL DISEASES

for the month of October, 1928

ETIOLOGICAL FACTORS

Lead Poisoning	6
Occupational Neurosis	2
Benzol	1
Dermatitis	
Oil	3
Chemical (including 8 delayed reports)	9
Fish (delayed reports)	3
Acid Plating (including 1 delayed report)	2
Mercury	6
Vegetable (delayed reports)	2
Conjunctivitis	
Mercury	3
	37

Hazards in Chromium Plating

The United States Public Health Service has made a study of the health hazards in the chromium plating industry. Six plants were visited. It was found that exposure to very low concentrations of chromic acids—one-sixtieth of a grain to three hundred fifty cubic feet of air—is sufficient to cause nosebleed and nasal inflamation in a week or two. High concentrations over a long period cause extensive attacks and even complete perforation of the nasal septum. Many of the employees were found to have chrome ulcers on the hands. No evidence was found of injury to the respiratory tract except the nose, nor of any effect upon the digestive system or the kidneys.

While, therefore, there is a real hazard in chromium plating it can be eliminated by an effective ventilating system in which the air is drawn horizontally across the tank through a narrow duct at a velocity of two thousand feet a minute. So far as possible rubber aprons, gloves and shoes should be worn and frequent applications of vaseline to the nose and hands will greatly reduce the danger of ulceration. All cuts and abrasions of the skin should receive prompt treatment. If these simple and entirely practical measures are taken, the hazard can be practically eliminated.

Preventable Diseases

OCTOBER, 1928

A comparison of the daily morbidity reports received during the month of October, 1928 with the corresponding month for the years 1923, 1924, 1925, 1926 and 1927.

	Average 1923-1927 for Oct.	Mean 1923-1927 for Oct.	1923	1924	1925	1926	1927	1928
Cerebrospinal meningitis ..	5	4	8	4	3	3	5	4
Diphtheria	150	142	203	173	126	108	142	103
Encephalitis epidemic	3	2	2	6	1	2	2	2
Measles	100	62	241	24	125	62	47	118
Poliomyelitis	18	17	17	19	3	8	42	18
Scarlet fever	167	139	201	247	134	139	113	87
Smallpox	....	....	....	....	....	....	....	....
Typhoid fever	33	30	60	30	42	17	18	9
Tuberculosis, pulmonary	123	122	129	122	108	112	146	106
Whooping cough	151	157	100	204	161	134	157	154

A comparison of the morbidity of all reportable diseases for the two preceding months, August, 1928, September, 1928 with the October 1928 record is as follows:

	Aug. 1928	Sept. 1928	Oct. 1928
Anthrax	1	....	....
Botulism	....	....	16
Cerebrospinal meningitis	6	3	4
Chickenpox	23	22	161
Conjunctivitis infectious	....	....	1
Diphtheria	47	73	103
Dysentery bacillary	3	1	1
Encephalitis epidemic	2	2	2
German measles	7	6	10
Influenza	11	17	21
Malaria	1	1	1
Measles	122	44	118
Mumps	39	30	51
Paratyphoid fever	1	2	1
Pneumonia, broncho	46	47	84
Pneumonia, lobar	36	49	87
Poliomyelitis	13	14	18
Scarlet fever	30	37	87
Septic sore throat	6	4	7
Tetanus	1	....	1
Trichinosis	....	....	1
Tuberculosis, pulmonary	127	120	106
Tuberculosis, other forms	24	5	6
Typhoid fever	19	11	9
Undulant fever	1	1	....
Whooping cough	266	130	154
Gonorrhea	136	157	196
Syphilis	166	142	204
Chancroid	1	....	....
Ophthalmia neonatorum	....	1	1

Cases of Certain Reportable Diseases

October, 1928	Population Est. as of July 1, 1927	Typhoid Fever	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Meningitis Cerebrospinal	Poliomyelitis	Tuberculosis Pulmonary	Tuberculosis Other Forms	Pneumonia Lobar	Pneumonia Broncho-	Other Com. Diseases
State Total	**1,613,874**	**..9**	**118**	**87**	**154**	**103**	**4**	**18**	**106**	**6**	**87**	**84**	**675**
NEW HAVEN CO.	**483,603**	**5**	**18**	**19**	**24**	**11**	**2**	**4**	**32**	**2**	**16**	**16**	**235**
New Haven	187,705	2	2	6	15	3		1	7	1	5	7	82
Waterbury	107,908			4	4	1	1		4		2	3	23
Meriden (city and town)	37,085					2		1	6	1	3	2	32
Ansonia	19,805		15			1	1		6				38
West Haven	19,334			1					8			1	3
Naugatuck	17,069	1									1		
Wallingford (town and boro)	12,747			1		1							
Milford	15,273			2	3						1		11
Derby	13,194	1											
Hamden	11,002	1			2	2			1		1		37
Branford (town and boro)	7,133										2		6
Seymour	8,526			5									
Towns under 5,000	21,792		1			1		2			1	3	3
FAIRFIELD CO.	**387,138**	**1**	**60**	**14**	**59**	**26**	**1**	**2**	**23**	**1**	**31**	**24**	**97**
Bridgeport	179,163	1	7	2	4	20			12	1	17	20	56
Stamford (city and town)	49,923			3	22	1	1		3		3		6
Norwalk	30,537				4				1		1		3
Danbury (city and town)	21,931		51	1	1	1		1	2		3	1	3
Greenwich (town and boro)	26,956			1	8						1	1	5
Stratford	17,451			1				1	1		2	1	5
Fairfield	16,091				1	4			3		1		2
Shelton	12,000			1								1	1
Westport	5,862			2							2		1
Towns under 5,000	27,224		2	3	19				1		1		15
HARTFORD CO.	**411,342**	**1**	**25**	**38**	**25**	**49**		**8**	**26**	**2**	**27**	**28**	**237**
Hartford	172,288	1	3	10	11	15		1	17	1	8	14	156
New Britain	72,654		18	3	5	4		2	1		8	5	23
Bristol (city and town)	26,820		1	3	3	1		1	2		4		16
Manchester	22,478			7		1			2		1		6
Enfield	13,445					2				1	1		8
East Hartford	14,311			1					2		1	2	3
Southington (town and boro)	10,123		2	5									2
West Hartford	12,763		1		1	1		1			2	2	1
Windsor	6,880			1	5			2	1				1
Glastonbury	6,288											1	
Wethersfield	5,387					1							5
Plainville	5,191												2
Towns under 5,000	42,714			8		24		1	1		2	4	14
NEW LONDON CO.	**116,306**	**2**	**3**	**10**	**30**	**7**		**1**	**16**		**7**	**5**	**41**
Norwich (city and town)	30,762	2		9	3	2			5		6	5	10
New London	30,770		1	1		3			2		1		16
Stonington (town and boro)	11,152		1						1				2
Groton (town and boro)	11,607				1								5
Towns under 5,000	32,015		1		26	2		1	8				8
LITCHFIELD CO.	**81,518**		**1**	**2**	**13**	**6**		**1**	**2**		**1**	**1**	**26**
Torrington (town and boro)	25,453												2
Winchester (inc. Winsted)	9,144												
Plymouth	6,554								1				3
Watertown	7,732				6	2			1				3
Towns under 5,000	32,635		1	2	7	4		1			1	1	18
WINDHAM CO.	**56,717**		**11**	**3**		**3**	**1**	**1**	**2**	**1**	**1**	**4**	**16**
Windham (inc. Willimantic)	14,509					1				1		1	1
Putnam (city and town)	9,334		11									2	4
Plainfield	8,909					1	1						1
Killingly (inc. Danielson)	9,517					1			1		1		7
Thompson	5,252							1	1				1
Towns under 5,000	9,196			3								1	2
MIDDLESEX CO.	**49,372**			**1**	**3**			**1**	**5**			**2**	**5**
Middletown (city and town)	23,000								1				3
Middletown State Hospital									1				
Towns under 5,000	26,372			1	3			1	3			2	2
TOLLAND CO.	**27,878**					**1**					**4**	**4**	**18**
Vernon (inc. Rockville)	8,751										1	1	3
Stafford (town and boro)	5,490										2	2	
Towns under 5,000	13,637					1					1	1	15

Library, Hygienic Laboratory,
25th & E. Sts., N.W.,
Washington, D.C.

Connecticut Health Bulletin

"For a Clean State and a Healthy People"

Vol. 42 December, 1928 No. 12

SPECIAL ARTICLES

Activities of the Connecticut State Department of Health

Need of Safeguarding the Worker's Health

October and November Vital Statistics

Index of Volume 42, 1928, Monthly Health Bulletin

STANLEY H. OSBORN, M. D., C. P. H., Commissioner

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HARTFORD

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MONTHLY HEALTH BULLETIN

Vol. 42 December, 1928 No. 12

A FEW MAJOR ACTIVITIES OF CONNECTICUT STATE DEPARTMENT OF HEALTH

In its effort to save lives through the education of its people in the control and prevention of disease and the safeguarding of its water supplies, the State Department of Health is carrying on many activities under its organization staff of Public Health Council, Commissioner of Health, eight bureaus and several divisions.

With the thought in mind that many communities in the state are perhaps familiar with only one phase of its work, the major activities of these bureaus and divisions are herewith reviewed so that people may become more familiar with the purpose of the department and may make larger use of its activities.

Bureau of Administration is under the immediate direction of the Commissioner:

(a) Who has supervision over the various bureaus and divisions, each of which is directed by a person trained in his special field.

(b) Is responsible for publications, department publicity and surveys.

(c) Makes biologics available for health officials.

(d) Accounts for and budgets department finances.

(e) Maintains a department library.

The Division of Supplies:

(a) Keeps and replenishes stock.

(b) Distributes biologics to health officers.

(c) Maintains the mailing lists.

(d) Purchases and keeps in repair department automobiles.

(e) Assists with department exhibits during fair season and sends an operator to show moving pictures when local equipment is not available.

Division of Medical Registration:

(a) Receives and keeps on file from the different medical examining boards, the chiropractic, midwifery, and chiropody boards, lists of applicants who have passed examinations in their respective branches and licenses those who have complied with the law.

(b) Receives and keeps on file applicants' duplicate certificates of approval from the different medical boards.

(c) Issues annual certificates of registration to physicians, chiropractors, natureopaths, chiropodists, registered nurses and midwives.

Lists of these registered physicians are published yearly.

Bureau of Preventable Diseases:

(a) Collects and tabulates data concerning the incidence of diseases in the state.

(b) Studies such data for the purpose of ascertaining what lines of activity are likely to be most effective in disease prevention.

(c) Makes emergency investigation of outbreaks of disease for the purpose of ascertaining the source of infection so as to block routes of further infection.

(d) Makes other field investigations of disease as to cause, incidence and methods of prevention.

(e) Lectures to various groups on disease prevention and prepares circulars and articles on health matters for the information of the public.

Information concerning the incidence of disease is received from local health officers who forward to the State Department reports of cases which they in turn receive from physicians.

Bureau of Vital Statistics: For the worker in public health, vital statistics have always given an index of the general health conditions of the state or other community being studied. It is only recently, however, that the general public has become alive to the fact that vital statistics are valuable as records in themselves as well as for the purpose of statistical analysis. With the increase of laws regulating labor and education it is now necessary that a birth certificate be produced before any child may work or go to school.

The Bureau:

(a) Exercises general superintendence over the registration of these important statistics. No record is received that is not carefully reviewed for errors or discrepancies. Noted variations are run down in an effort to make every report consistent. This work is based on the reports of births, marriages and deaths, copies of original certificates, which are received monthly in the bureau. On an average some four thousand such reports pass through the office routine. In addition to careful review, this process includes much detail of coding for residence, occupation, cause of death, nationality and other items which are ultimately tabulated in

the registration report which is published annually by the bureau. In order that a true index may be had of the actual state of affairs with reference to general health conditions, all deaths are now allocated to the place where they should justly appear rather than to the place where death actually occurred. In a similar way the births are allocated to the residence of the mother, this being necessary in order that the infant mortality may be more nearly correct.

(b) At the end of each month makes a table for the preceding month setting forth a preliminary report of general conditions for that month.

(c) Cooperates with the Federal Bureau of the Census by sending copies of births and deaths to that office where they are tabulated in the figures for the nation.

(d) Keeps these valuable records in a permanent file in fireproof vaults and this has been done since July 1, 1897. There are upwards of two million such records in the custody of the state guaranteeing to its citizens permanency of record.

(e) From time to time makes special study of the causes of various diseases with reference to trend, sex, age distribution, seasonal variation or any other fact it may seem advisable to study.

Bureau of Laboratories:

(a) Examines disease specimens for physicians and health officers in prevention of contagious diseases.

(b) Examines water and milk samples at request of health officers and State Dairy and Food Commissioner.

(c) Examines heads of animals suspected of being rabid.

(d) Tests and examines clinical thermometers and compares with the state clinical standard to certify thermometers for professional use, and to license thermometer manufacturers with a Connecticut seal so that they may be sold in this state.

(e) Manufactures silver nitrate ampules for distribution throughout the state.

(f) Inspects laboratories in the state for the annual approval by the State Department of Health.

Bureau of Sanitary Engineering. The work includes:

(a) The examination, approval, and filing of plans, specifications and maps of public and semi-public water supply systems and plans for treatment of sewage and other wastes.

(b) Sanitary supervision of public water and ice supplies and of public sewage treatment plants.

(c) Investigation of insanitary conditions as a result of complaint or petition.

(d) Sanitary supervision of shellfish areas and production methods.

(e) Approval of cemetery locations.

(f) Inspections of bathing beaches, swimming pools, slaughter houses, summer camps, summer boarding houses, roadside eating places and water supplies.

(g) Advice and assistance on matters pertaining to institutional and private water supply and sewage disposal.

Bureau of Child Hygiene. The activities are carried on through:

(a) Well Child Conferences: This represents the major part of the bureau work. Over fifty of these are held regularly in different parts of the state. The work is done by local doctors, nurses and lay helpers. If there are no resident doctors or nurses the services of the bureau staff are given. Whenever there are local doctors or nurses, if for any reason they cannot be present at the well child conference on any particular day the bureau supplies the need for that day only.

(b) Summer Round-up: Getting the four to six year old group of children ready to enter the fall term of school as nearly 100 per cent physically fit as possible is carried on for the Connecticut Congress of Parents and Teachers through their cooperation and that of the local school authorities. There are always two examinations made in this work, namely; the preliminary—for the finding of defects, and the final or check-up examination—to ascertain how many of the defects found have been corrected during the interval of time between the two examinations.

(c) May Day: The object of this May Day celebration is to get across a campaign of child health to every community in the state. This is accomplished through a safe milk drive, radio talks, distribution of child health literature and the stimulation of health plays and teachings in the public schools.

(d) Dental Hygiene: The dental program is prophylactic and educational work among the mothers and children from two to six years of age.

(e) Instruction of Midwives, under the supervision of a doctor, the aim of whose teaching is to raise the ideals and working standards of the midwives as a body.

(f) Prenatal Instruction, through the issuance of a series of prenatal letters sent upon request to prospective mothers. With the first of these letters is included a pamphlet on prenatal care.

(g) Birth Certificates: Twelve of the larger cities and towns of Connecticut issue their own birth certificates through the local boards of health. Aside from these a birth certificate is sent from this bureau to the mother of each new born child. To each certificate is attached a notice calling the attention of the mother to the importance of having the child immunized against diphtheria at any time after it is six months old. At the same time a pamphlet on Infant Care is mailed.

Bureau of Public Health Nursing:

(a) Visits towns to help organize public health nursing associations.

(b) Consults and advises with public health nurses on special problems.

(c) Meets with boards of directors of associations to discuss problems of administration.

(d) Obtains qualified nurses for towns, encouraging registered nurses to take special training for public health work.

(e) Tabulates and analyzes reports of field work adopting a uniform record form so that the results in the monthly analysis may be comparable.

The 1927 Legislature passed a bill making available state aid for public health nursing, except public school nursing, in towns whose tax receipts do not exceed $50,000 for three fiscal years preceding. Aid is given on a pro rata basis according to the tax receipts.

Bureau of Public Health Instruction keeps the department activities to the forefront in all parts of the state through its supervision of:

(a) Weekly and monthly health bulletins.

(b) Placing and distribution of health educational material such as moving picture films and equipment; stereopticon slides; strip films and equipment; health posters.

(c) Makes arrangements for lectures and public health courses.

(d) Plans and installs health exhibits.

Nutrition under the supervision of this bureau is carried on through:

(a) Nutrition articles, leaflets, and a Nutrition Handbook.

(b) Lectures and nutrition courses for public health nurses and other leaders.

(c) Nutrition exhibits.

Division of Mental Hygiene:

(a) Spreads information regarding the extent of mental disorders and Connecticut's facilities for its care and prevention.

(b) Gathers statistics, and makes surveys of existing mental hospitals, psychiatric clinics, etc.

(c) Gives assistance in the establishment of local mental hygiene clinics, for the purpose of correcting incipient mental symptoms in adults and behavior difficulties in children.

(d) Prepares and distributes articles and leaflets on mental hygiene and child training.

(e) Arranges talks before groups of parents, school groups, nurses, etc., on the general subjects of mental hygiene and habit training for children.

Division of Veneral Diseases:

(a) Bends its efforts to the elimination of syphilis and gonorrhea to the end that fewer serious mental cases which often result from these diseases will seek entrance to the state hospitals, thereby saving the state large sums.

(b) Keeps in contact with physicians in the state, urging them to a more adequate reporting of cases and assists them to follow up the delinquents to round up questionable characters or sources of infection. Urges reporting of cases in the communicable stage of the disease by name as required by the 1927 law.

(c) Co-operates with treatment stations in cities and towns, maintaining on its staff for this purpose a field worker who is available to follow up cases who may have discontinued necessary treatments.

(d) Works in conjunction with health officers and various social agencies through talks, pamphlets and moving picture films and spreads information about social hygiene in an effort to prevent these diseases through an enlightened public.

Division of Occupational Diseases. The law provides that all cases of occupational diseases shall be reported by physicians to the State Department of Health. These reports are utilized to formulate practical constructive methods for the elimination of the causes of occupational diseases. The division furnishes a central source of information for industry and others interested in the elimination of occupational diseases and provides a service that may be utilized by any physician or industry to study any condition in industry that may affect the health of the workers whether it be a problem of industrial fatigue, lighting, ventilation, removal of dusts, fumes of toxic materials, etc.

Occupational Diseases

OCCUPATIONAL DISEASES

for the month of November, 1928

ETIOLOGICAL FACTORS

Mercury	
Dermatitis	11
Oil	
Dermatitis	1
Cyanide solution	
Burns (delayed)	1
Sand (Blast)	
Dermatitis (delayed)	1
Sand (Foundry)	
Dermatitis (delayed)	1
Allergia (Vegetable Dust)	
Dermatitis (delayed)	1
	16

Need of Safeguarding The Workers' Health

A high labor turnover in any department or process should be the occasion for a careful job analysis and a careful checking of the effects of the process on the workers. Yet how many manufacturers seek to blindly remedy the conditions by the expensive expedient of supplying and training new labor without attempting to remedy the cause. The manufacturer who does not know the effect of the processes upon his workers is inviting a tragedy. He is letting profits slip out the bung hole while he saves at the spigot, pouring a priceless commodity—trained labor—into a bottomless pit. This is not theory but hard practical fact that we have demonstrated over and over again, a fact that finally shows up on the cost sheets.

The Division of Occupational Diseases of the State Department of Health is a service department, not a press bureau. If you have a department or process in which you have a high labor turnover, if you are paying excessive compensation rates, if you do not know the effect of your processes upon your employees, you have a problem, and we will be glad to work in cooperation with you to suggest practical methods for its control.

Vital Statistics

MONTH OF OCTOBER

Totals for the First Ten Months of the Year, 1928, 1927, 1926.

Year	Births	Birth Rate*	Marriages	Mar. Rate*	Deaths	Death Rate*
1926	24,797	19.1±.1	10,489	8.1±.1	15,377	11.8
1927	24,352	18.4±.1	10,397	7.8±.1	13,972	10.5
1928	22,235	16.5±.1	9,170	6.8±.1	14,834	11.0

*Rates per 1,000 population

The accumulated figures above show the comparative results of ten months experience for the last three years. With monotonous regularity the birth rate is showing a marked decline. Month after month this has been true. In association with this the marriage rate is also decreasing.

The death rates are of more interest. The year 1927 was the record year for the state. The year 1928 is beginning to show symptoms of being the second best year in the history of Connecticut vital statistics. To be sure the final death rate must be below 11.3 recorded in 1924. The rate for the current year is likely to be 11.0 or 11.1.

Births

For the month, only 2,011 birth records were received. This gives a birth rate of 15.0. Last month it was 15.5. It is not so long ago that the birth rate was over 25 per 1,000 of the population. In 1916 it was 28.4. In that year the death rate was 16.2 or the difference between the two was 12.2 For October, referring to an annual basis, the birth rate is 15.0 and the death rate is 10.3. Here is a difference of 4.7 This differnece has been called the Vital Index, and certainly in Connecticut this Index has been tremendously reduced. When the birth rate and the death rate are about equal, of course a population will be augmented only by immigration. If this is in excess of the emigration then the population will increase. These factors of immigration and emigration are very difficult to estimate. If they are neglected for the moment it is at once apparent that there is not at present a very large factor of safety in Connecticut's Vital Index. The death rates which are now being recorded are extremely low. This indicates a healthy condition throughout the entire population. But it would not take a very violent year to disrupt the Vital Index. It would **appear** to be a violent year, because such favorable years are in the immediate past. But compared to an **average** year over a great many years, the year which is entirely in the realm of possibility, and a year which could and would wipe out the Vital Index, such a year would

not depart hugely from the long-time average. These are very important considerations and no doubt will become increasingly so as time goes on, and if the margin of the Vital Index is still further decreased.

Stillbirths

During the month 64 stillbirths were received, of which 41 were males and 23 females, to give the very high sex ratio of 178 males to 100 females. The rate of stillbirths for total births is 30.8 per 1,000. Last year there were 75 stillbirths and the rate was 31.5 per 1,000 total births. The difference in these rates is negligible.

Deaths

The number of deaths reported for October increased to 1,386 from 1,310 comparing 1928 and 1927 respectively. This is a gain of 76. A gain of 76 in any month will appear relatively small, but on an **annual** basis it is **not** negligible. This is best shown in a comparison of rates rather than numbers. The rate in 1928 is 10.3 per 1,000 population and in 1927 it was 9.9. However, the monthly rate of 10.3 is not excessively high. In fact it is a favorable rate, suffering only when compared with 1927 which was a year of many records as far as low death rates are concerned.

The deaths for certain causes and comparing 1928 and 1927 will now be given:

Cause of Death	1928	1927	Increase	Decrease
Typhoid fever	0	5±2	....	5±2
Measles	0	0	....	....
Scarlet fever	0	2±1	....	2±1
Whooping cough	8±3	5±2	3±4	....
Diphtheria	7±3	9±3	....	2±4
Influenza	17±4	6±2	11±5	....
Poliomyelitis	2±1	6±2	....	4±3
Epidemic encephalitis	1±1	3±2	....	2±2
Cerebrospinal meningitis	3±2	1±1	2±2	....
Tuberculosis, pulmonary	73±9	63±8	10±12	....
Tuberculosis, other forms	14±4	10±3	4±5	....
Cancer	182±13	178±13	4±19	....
Diabetes mellitus	25±5	26±5	....	1±7
Diseases of the heart	215±15	210±14	5±21	....
Broncho pneumonia	54±7	42±6	12±10	....
Lobar pneumonia	43±7	38±6	5±9	....
Pneumonia, undefined	4±2	4±2	....	....
Diarrhea and enteritis under 2	12±3	28±5	....	16±6
Nephritis	83±9	85±9	....	2±13
Puerperal diseases	13±4	16±4	....	3±5
Suicide	20±4	13±4	7±6	....
Accident	98±10	79±9	19±13	....
Other causes	512±23	481±22	31±32	....
Totals	1386±37	1310±36	113	37

Of the increases only that of 11±5 for influenza seems to be noteworthy. Similarly there is only one decrease, that of 16±6 for diarrhea under 2, which is significant.

Included in the accidental deaths are 46 deaths due to automobile accidents. This is **twelve** more than the 34 reported in 1927.

The total mortality for the same causes and for the first ten months of 1928 and 1927 is given below.

Cause of Death	1928	1927	Increase	Decrease
Typhoid fever	10	16	....	6
Measles	56	21	35	....
Scarlet fever	21	18	3	....
Whooping cough	94	35	59	....
Diphtheria	68	72	....	4
Influenza	296	256	40	....
Poliomyelitis	11	15	....	4
Epidemic encephalitis	17	15	2	....
Cerebrospinal meningitis	15	10	5	....
Tuberculosis, pulmonary	813	777	36	....
Tuberculosis, other forms	112	116	....	4
Cancer	1442	1409	33	....
Diabetes mellitus	*	*	....	....
Diseases of the heart	2278	2356	....	78
Broncho pneumonia	671	502	169	....
Lobar pneumonia	717	581	136	....
Pneumonia, undefined	27	20	7	....
Diarrhea and enteritis under 2	97	143	....	46
Nephritis	*	*	....	....
Puerperal diseases	135	140	....	5
Suicide	188	169	19	....
Accident	968	869	99	....
Totals	8036	7540	643	147

It will be immediately apparent that there is an increase in the diseases of childhood, with measles and whooping cough leading. Recently measles has shown a skip year period; up one year, down the next. It is doubtful if the increases for pulmonary tuberculosis and cancer are of particular significance. The increases in the pneumonias are certainly well defined, as is also the increase in accidental deaths.

The decrease in heart disease is of doubtful significance. But the decrease in deaths due to infantile diarrhea is most certainly noteworthy and reliable.

FOR SIX YEARS—OCTOBER, 1928

CONNECTICUT	1923	1924	1925	1926	1927	1928
BIRTHS *Birth Rate*	2455 19.9	2528 20.2	2499 19.6	2391 18.4	2307 17.4	2011 15.0
DEATHS *Death Rate*	1262 10.3	1417 11.3	1450 11.4	1373 10.6	1310 9.9	1386 10.3
MARRIAGES *Marriage Rate*	1514 12.3	1415 11.3	1485 11.6	1426 11.0	1335 10.1	1265 9.9
COMMUNICABLE DIS.* DEATHS *Per Cent to Total Deaths*	123 9.7	135 9.5	104 7.2	118 8.6	97 7.4	110 7.9
DEATHS UNDER 1 YEAR *Rate Per 1 000 Births*	170 66.2	165 62.3	191 76.9	157 65.2	120 49.9	138 59.2

*Includes Typhoid Fever, Measles, Scarlet Fever, Whooping Cough, Diphtheria, Tuberculosis Pulmonary, Cerebrospinal Meningitis, Poliomyelitis, Influenza.

1928 Bids Fair to be another Low Record Year

Statistics
October, 1928

State of Connecticut	Population Est. as of July 1, 1928 Based on U. S. Census	TOTALS				DEATH RATES			Typhoid Fever (1)	Measles (7)	Scarlet Fever (8)
		Births	Stillbirths	Marriages	Deaths	Deaths under 1 year	All Causes (per 1,000 pop.)	Children under 1 year (per 1,000 births)			
	1,613,874	2011	64	1265	1386	138	10.3	59.2	.....	.....	.....
Ansonia	19,805	25	1	18	17	2	10.3	104.8	.....	.....	.....
Branford	7,133	13	.....	6	7	.....	11.8	.....	.....	.....	.....
Bridgeport	179,163	184	7	99	117	10	7.8	38.4	.....	.....	.....
Bristol	26,820	42	2	29	25	3	11.2	55.8	.....	.....	.....
Danbury	21,931	38	.....	18	28	2	15.3	41.6	.....	.....	.....
Derby	13,194	13	2	13	15	4	13.6	113.2	.....	.....	.....
East Hartford	14,311	21	1	9	10	3	8.4	270.6	.....	.....	.....
East Haven	5,030	9	.....	.....	.....	.....	.....	.....	.....	.....	.....
Enfield	13,445	17	.....	15	9	.....	8.0	.....	.....	.....	.....
Fairfield	16,091	16	.....	10	8	.....	6.0	.....	.....	.....	.....
Glastonbury	6,288	6	.....	4	3	.....	5.7	.....	.....	.....	.....
Greenwich	26,956	30	.....	68	23	3	10.2	78.3	.....	.....	.....
Groton	11,607	9	.....	7	15	.....	15.5	.....	.....	.....	.....
Hamden	11,002	18	.....	8	12	2	13.1	183.2	.....	.....	.....
Hartford	172,288	228	9	159	153	22	10.7	63.3	.....	.....	.....
Killingly	9,517	9	.....	8	7	1	8.8	69.0	.....	.....	.....
Manchester	22,478	26	1	15	16	1	8.5	29.5	.....	.....	.....
Meriden	37,085	45	3	41	32	4	10.4	60.8	.....	.....	.....
Middletown	23,000	20	.....	22	21	3	11.0	58.8	.....	.....	.....
Milford	15,273	13	.....	9	11	1	8.6	80.0	.....	.....	.....
Naugatuck	17,069	25	.....	18	9	1	6.3	116.5	.....	.....	.....
New Britain	72,654	93	2	59	45	4	7.4	30.6	.....	.....	.....
New Haven	187,705	241	6	152	129	16	8.2	53.9	.....	.....	.....
New London	30,770	37	1	36	20	4	7.8	64.0	.....	.....	.....
Norwalk	30,537	34	4	26	20	1	7.9	17.4	.....	.....	.....
Norwich	30,762	59	2	31	51	3	19.9	49.8	.....	.....	.....
Plainfield	8,909	8	.....	3	7	.....	9.4	.....	.....	.....	.....
Plainville	5,191	4	.....	.....	3	.....	6.9	.....	.....	.....	.....
Plymouth	6,554	8	.....	4	4	.....	7.3	.....	.....	.....	.....
Putnam	9,334	15	1	17	5	.....	6.4	.....	.....	.....	.....
Seymour	8,526	10	.....	7	5	1	7.0	190.4	.....	.....	.....
Shelton	12,000	11	.....	2	10	.....	10.0	.....	.....	.....	.....
Southington	10,123	12	.....	5	4	1	4.7	89.6	.....	.....	.....
Stafford	5,490	8	1	5	4	2	8.7	125.6	.....	.....	.....
Stamford	49,923	93	2	50	39	7	9.4	68.9	.....	.....	.....
Stonington	11,152	7	.....	7	10	.....	10.8	.....	.....	.....	.....
Stratford	17,451	17	.....	8	14	.....	9.6	.....	.....	.....	.....
Thompson	5,252	5	.....	4	2	.....	4.6	.....	.....	.....	.....
Torrington	25,453	30	3	12	10	.....	4.7	.....	.....	.....	.....
Vernon	8,751	9	.....	9	5	.....	6.9	.....	.....	.....	.....
Wallingford	12,747	5	.....	7	22	.....	20.7	.....	.....	.....	.....
Waterbury	107,908	124	5	46	79	14	8.8	81.5	.....	.....	.....
Watertown	7,732	14	.....	3	6	.....	9.3	.....	.....	.....	.....
West Hartford	12,763	35	.....	10	29	.....	27.3	.....	.....	.....	.....
West Haven	19,334	40	2	10	13	1	8.1	34.2	.....	.....	.....
Westport	5,862	5	.....	4	10	.....	20.5	.....	.....	.....	.....
Wethersfield	5,387	7	.....	1	8	1	17.8	342.8	.....	.....	.....
Winchester	9,144	6	2	9	14	.....	18.4	.....	.....	.....	.....
Windham	14,509	26	1	14	7	.....	5.8	.....	.....	.....	.....
Windsor	6,880	8	.....	4	12	1	20.9	218.1	.....	.....	.....
Other States		26	.....	.....	36	1	.....	.....	.....	.....	.....
Towns under 5,000	205,585	207	6	144	225	19	13.1	98.9	.....	.....	.....

DEATHS FROM IMPORTANT CAUSES

Whooping Cough (9)	Diphtheria (10)	Influenza (11)	Poliomyelitis (22)	Epidemic Encephalitis (23)	Meningitis Cerebrospinal (24)	Tuberculosis-Pulmonary (31)	Tuberculosis-Other Forms (32-37)	Cancer (43-49)	Diabetes Mellitus (57)	Diseases of the Heart (87-90)	Pneumonia-Broncho 100 (1)	Pneumonia-Lobar 101 (1)	Pneumonia-undefined 101 (2)	Diarrhea and Enteritis under 2 (113)	Nephritis (128-129)	Puerperal Diseases (143-149)	Suicide (165-174)	Accident (175-189)
8	7	17	2	1	3	73	14	132	25	215	54	43	4	12	83	13	20	98
1									1	5								1
						1						2					2	2
1	1	3				5	3	18	2	13	6	3			4	2	5	5
						1	1	4		2		1		1	1		1	1
								2		4	2	2			2		1	2
						1		1		2				1	2			
						1		1		1	1			1	1			
						1	1	1		3						1	1	
								1		2					1	1		2
										3								
						1		2	1	5					2		1	4
								4		3		1			1			1
		1						1		4								1
2	2		1		1	7	3	20		19	11			3	11	2		7
								1		1								
	1					1		5		1							1	
	1	1				4		7		2		1			1			2
						2		3		5		1			1			
						1		2	1	1					1			
								1		1		1		1				1
		2				4		6	1	6	2	3			2			4
1		1				8	1	12	2	25	5	8			6	2	1	8
								1	1	7	1	1		2				2
						1		4		2		1			1			2
		2	1			2	1	10	1	7	1	1			2	1	1	2
					1	1		1		2								
				1											1			1
								1		1					1			
								2							1			
						1	1									1		1
						1			2	3		1			1			1
											2							
								1										2
1		2				5		8	1	1		1		1	4	1		3
										2	1							
						1	1			7	1	1			1			1
								1										
1						2		2								1		1
										2		1						1
						3		1		6					1			4
		1			1	4		9	6	10	4	1	1	1	7	1	1	7
						1		1										1
1								3	1	7	1				2			1
						2		2	1	1	3	1						
								1		2	2	3			1			
		1						2		1	1				1		1	2
							1	1		1					1			1
						1		1		3	1	1			1			2
		2				2		3		6	3		1			1		
	2	1				8	1	31	4	36	6	7	2	2	20		3	21

Laboratories

SUMMARY OF BUREAU ACTIVITIES

NOVEMBER, 1928

	DIAGNOSTIC					Exam-inations
	+	—	?	Unclassified	Specimens	
Typhoid	4	214	....	....	218	218
Paratyphoid A	....	217	....	....	....	217
Paratyphoid B	....	217	....	....	....	217
Diphtheria	71	1138	....	....	616	1209
Diphtheria Virulence	9	47	....	....	50	56
Vincent's Angina	4	597	....	....	5	601
Hemolytic Streptococci	12	583	....	....	....	595
Tuberculosis	24	165	....	....	179	189
Syphilis	668	2925	62	....	2386	3655
Gonorrhea	27	125	....	....	152	152
Pneumonia	6	4	....	....	10	10
Rabies	3	3	....	....	4	6
Glanders	....	1	....	....	1	1
Specials	5	87	....	62	20	154
					3641	7280

CHEMICAL AND BACTERIOLOGICAL

Milk samples	435	825
Water samples	811	1033
Ice samples	7	7
Sewage samples	50	50
Seafood samples	8	8
Clinical thermometers	791	791
Totals	5743	9994
Total laboratory procedures		20842

NOVEMBER 1927 AND 1928 COMPARED

In comparing the work of the laboratories during the months of November, 1927, and November, 1928, the following figures are interesting:

	1927	1928
Milk examinations	189	825
Water examinations	265	1033
Sewage examinations	12	50
Special examinations	20	154

Preventable Diseases

NOVEMBER, 1928

A comparison of the daily morbidity reports received during the month of November, 1928 with the corresponding month for the years 1923, 1924, 1925, 1926 and 1927.

	Average 1923-1927 for Nov.	Mean 1923-1927 for Nov.	1923	1924	1925	1926	1927	1928
Cerebrospinal meningitis ..	3	2	9	3	1	2	....	1
Diphtheria	181	173	264	221	173	110	136	106
Encephalitis epidemic	3	3	2	4	4	3	2	2
Measles	203	105	108	22	33	26	193	326
Poliomyelitis	6	3	9	3	3	1	16	8
Scarlet fever	283	231	343	432	185	231	223	145
Smallpox	1	4	2	4	....	....	....	7
Typhoid fever	16	17	22	13	17	10	18	6
Tuberculosis, pulmonary	109	106	119	115	103	106	100	110
Whooping cough	246	235	186	302	235	175	332	161

A comparison of the morbidity of all reportable diseases for the two preceding months, September, 1928 and October, 1928 with the November 1928 record is as follows:

	Sept. 1928	Oct. 1928	Nov. 1928
Cerebrospinal meningitis	3	4	1
Chickenpox	22	161	409
Conjunctivitis infectious	....	1	5
Diphtheria	73	103	106
Dysentery bacillary	1	1	....
Encephalitis epidemic	2	2	2
Food poisoning	....	16	4
German measles	6	10	25
Influenza	17	21	12
Malaria	1	1	....
Measles	44	118	326
Mumps	30	51	225
Paratyphoid fever	2	1	....
Pneumonia, broncho	47	84	83
Pneumonia, lobar	49	87	95
Poliomyelitis	14	18	8
Scarlet fever	37	87	145
Septic sore throat	4	7	9
Smallpox	....	....	7
Tetanus	....	1	....
Trichinosis	*	1	2
Typhus fever	....	....	1
Tuberculosis, pulmonary	120	106	110
Tuberculosis, other forms	5	6	7
Typhoid fever	11	9	6
Undulant fever	1	....	1
Whooping cough	130	154	161
Gonorrhea	157	196	180
Syphilis	142	204	202
Chancroid	....	....	2
Opthalmia neonatorum	1	1	....

Cases of Certain Reportable Diseases

November, 1928	Population Est. as of July 1, 1927	Typhoid Fever	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Meningitis Cerebrospinal	Poliomyelitis	Tuberculosis Pulmonary	Tuberculosis Other Forms	Pneumonia Lobar	Pneumonia Broncho-	Other Com. Diseases
State Total	**1,613,874**	**6**	**326**	**145**	**161**	**106**	**1**	**8**	**110**	**7**	**95**	**83**	**1086**
NEW HAVEN CO.	**483,603**	**4**	**68**	**26**	**40**	**14**			**65**	**3**	**25**	**17**	**333**
New Haven	187,705	3	10	10	11	1			54	2	7	1	134
Waterbury	107,908	1		6	2	1			6	1	4	7	37
Meriden (city and town)	37,085		1	2					3		5	7	27
Ansonia	19,805		54		3	1					3		42
West Haven	19,334			1		2					1	1	5
Naugatuck	17,069										1		2
Wallingford (town and boro)	12,747								1				
Milford	15,273			5	9								6
Derby	13,194					2							
Hamden	11,002			1	12	2					1		62
Branford (town and boro)	7,133					2					1		7
Seymour	8,526								1				
Towns under 5,000	21,792		3	1	3	3					2	1	11
FAIRFIELD CO.	**387,138**		**134**	**25**	**41**	**36**			**17**		**27**	**20**	**175**
Bridgeport	179,163		25	7	8	22			6		19	15	44
Stamford (city and town)	49,923		1	7	3				3		1		44
Norwalk	30,537				1	1			1				26
Danbury (city and town)	21,931		64	1							1	2	9
Greenwich (town and boro)	26,956			5	6				1		4	1	35
Stratford	17,451			1		3			1				
Fairfield	16,091								1		1	1	5
Shelton	12,000		4		3	1			1				4
Westport	5,862			1		2							
Towns under 5,000	27,224		40	3	20	7			3		1	1	8
HARTFORD CO.	**411,342**	**1**	**70**	**59**	**25**	**46**	**1**	**8**	**16**	**2**	**24**	**26**	**362**
Hartford	172,288	1		17	12	24	1	5	10	2	8	11	213
New Britain	72,654		40	7	2				1		8	5	26
Bristol (city and town)	26,820			2	3	2			2		3	1	28
Manchester	22,478			12		1		1	2		1	1	9
Enfield	13,445		3			2					1		29
East Hartford	14,311			4								2	12
Southington (town and boro)	10,123		5								1		3
West Hartford	12,763		1			1		1				4	3
Windsor	6,880		1	2	1						1	1	7
Glastonbury	6,288												
Plainville	5,191			3									1
Wethersfield	5,387			1		1		1	1				
Towns under 5,000	42,714		20	11	7	15					1	1	31
NEW LONDON CO.	**116,306**		**6**	**13**	**4**	**3**			**7**	**2**	**7**	**7**	**63**
Norwich (city and town)	30,762		1	6		2			2	1	1	3	21
New London	30,770		3		2	1				1	2	3	16
Stonington (town and boro)	11,152												2
Groton (town and boro)	11,607		1	1							2		12
Towns under 5,000	32,015		1	6	2				5		2	1	12
LITCHFIELD CO.	**81,518**			**9**	**21**	**3**					**3**	**3**	**9**
Torrington (town and boro)	25,453												
Winchester (inc. Winsted)	9,144				1								
Plymouth	6,554										1	2	1
Watertown	7,732			8	5	2							
Towns under 5,000	32,635			1	15	1					2	1	8
WINDHAM CO.	**56,717**		**43**	**1**	**26**				**2**		**4**	**1**	**38**
Windham (inc. Willimantic)	14,509												9
Putnam (city and town)	9,334		37		8				1		2		9
Plainfield	8,909		1	1	8				1			1	1
Killingly (inc. Danielson)	9,517		2		10						1		18
Thompson	5,252		1										1
Towns under 5,000	9,196		2								1		
MIDDLESEX CO.	**49,372**	**1**	**3**	**2**	**4**	**3**			**2**		**3**	**8**	**96**
Middletown (city and town)	23,000	1				2			1		1	8	67
Middletown State Hospital													1
Towns under 5,000	26,372		3	2	4	1			1		2		28
TOLLAND CO.	**27,878**		**2**	**10**		**1**			**1**		**2**	**1**	**10**
Vernon (inc. Rockville)	8,751			1		1							2
Stafford (town and boro)	5,490										2	1	6
Towns under 5,000	13,637		2	9					1				2

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